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Fall 1968







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# COLLEGE DROPOUTS

## The Pause that Refreshes

### Who? Why? How Long?

by Dana L. Farnsworth '33

**T**HE term dropout represents many of the issues and problems involved in what the term is used to describe; these fall into two main categories. First, the obvious connotations of waste, failure, disruption, reflect the depth and prevalence of pejorative attitudes toward interrupted education. Second, the use of one term for what is in fact a variety of phenomena reveals a failure to acknowledge sufficiently and deal with the many different reasons for and modes of interrupting education. There are several broad categories of dropping out; viz., voluntary and involuntary, academic, psychiatric, medical, disciplinary, financial, as well as overlapping combinations and some that are not clearcut or are misleading. For example, transfers are considered dropouts, as are students who do not graduate within four years but do so at a later time; and students who purposely arrange, in one way or another, to be dismissed are labeled "involuntary." Talented people who never attend college are not considered at all. Moreover, these categories are statistical and administrative means for talking about large numbers of individual students, each fundamentally his own category in terms of personal psychology within a psychosocial stage, at a specific institution. This does not mean that it is useless to study dropping out; it *does* mean that some past conclusions are at least suspect and at most dead wrong. We must, therefore, pay close attention to previous attitudes and assumptions, new data provided by research, and our own personal and professional biases. Moreover, we must be constantly aware that the real subject of our concern is students and their best interests.

Dr. Farnsworth is Henry K. Oliver Professor of Hygiene and Director of the University Health Services. This paper was delivered at the 5th Biennial Division Meeting, New York District Branches, American Psychiatric Association, November 18, 1967.

The national average of students who graduate at the time scheduled for the class of their matriculation is 40 per cent. Figures at individual colleges vary tremendously; for example, the University of Georgia reports 35 per cent, and Princeton University 80 per cent. In general, state institutions (which are legally required to accept most of the state's high-school graduates on application) have high, early dropout rates. A notable exception is the University of California, at which the top 15 per cent of high-school graduates are eligible for admission, and 45 per cent of the students do not complete degree requirements. Dropout rates at Harvard and Princeton are distributed evenly over the four years, while 74 per cent of the withdrawals at the University of Iowa occur before the beginning of the sophomore year<sup>1</sup>.

Until recently the prevailing attitude has been that dropping out is a disastrous act or one that is immediately useful, but boobytrapped in terms of longterm goals, achievements, and life style. However, follow-up studies of dropouts from two British universities, Princeton, Yale, and the University of Illinois indicate that dropping out is not necessarily a permanent handicap, and that many dropouts subsequently make satisfactory academic, vocational, and personal adjustments. Whereas follow-up findings vary among institutions, the data from the Princeton study are generally representative.

There is no evidence that the percentage of students withdrawing from Princeton is increasing. The data suggest that current students more often dropout for personal than academic reasons. Academic ability alone plays a minor role in determining which students dropout and is not useful in attempting to predict which students will dropout, or whether those who do so will succeed when re-admitted. More than half of those who dropout of Princeton come back and graduate, and several finish their undergraduate work at other colleges.

My colleague, Dr. Armand Nicholi, has made a study of



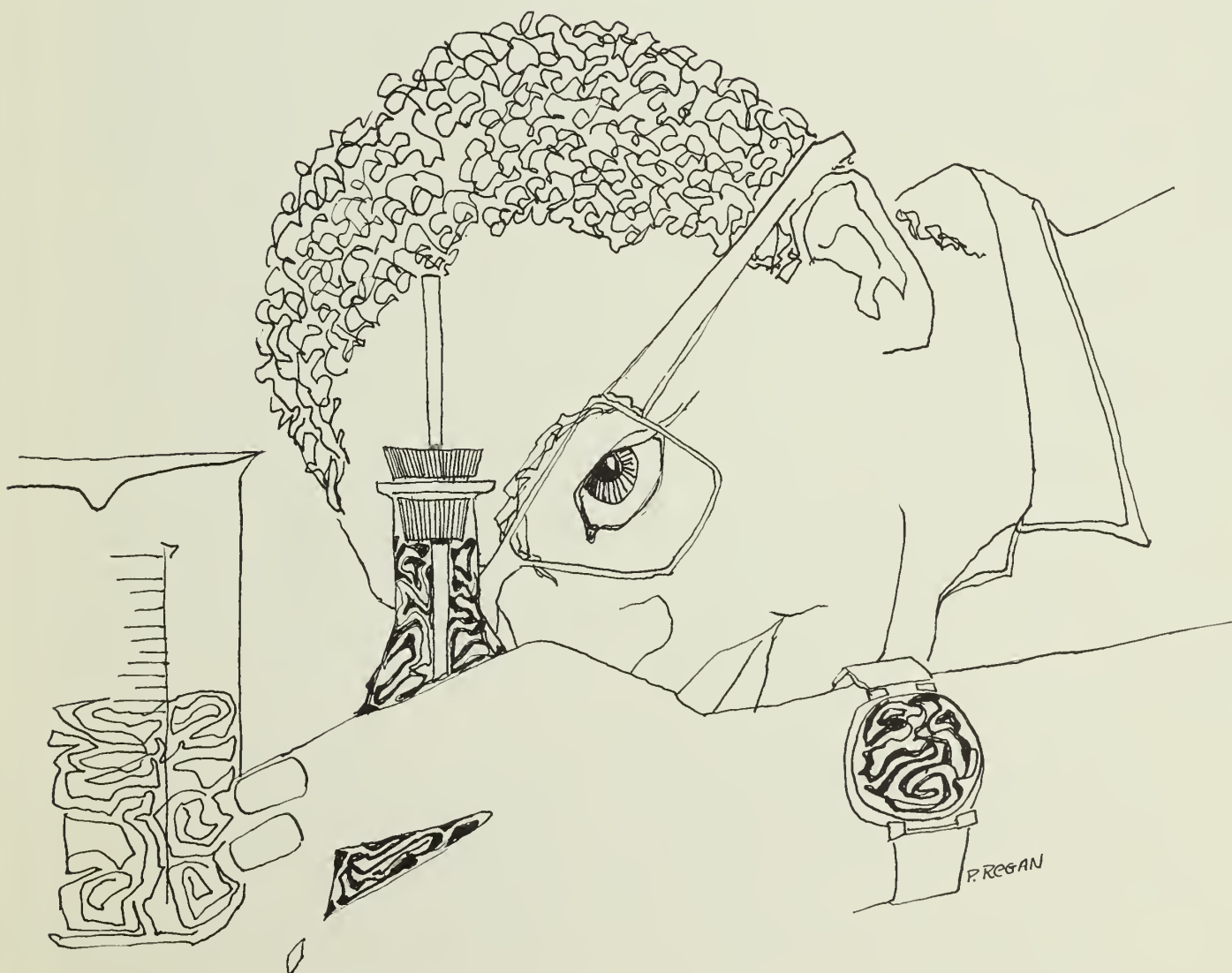
1,454 students who left Harvard College for all reasons between 1955 and 1964. He found that more than 38 percent of this group had consulted a psychiatrist before leaving and had had a psychiatric diagnosis made (compared to 9 percent of all students who consult the psychiatric service each year, or 20 percent sometime during their college careers). In addition, another 13 percent consulted a psychiatrist after leaving. When the "psychiatric dropouts" were compared with those who left for all other reasons, there was no significant difference in rate of return to college, attainment of honors, or eventual graduation from Harvard.

Upon return, those who had left for psychiatric reasons did just as well as those who left for all other reasons. However, the higher the PRL (predicted rank list) of the dropout, the more likely he would leave for psychiatric reasons. The same relationship was true when the SAT alone was considered.

It would be easy to jump to the conclusion that the higher the student's intelligence, the more likely that he would drop out for psychiatric reasons. This could then lead to the even more erroneous assumption that the higher a student's intelligence, the greater the risk that he would have a psychiatric disorder.

SEEKING psychiatric help is not associated with intelligence, creativity, or academic performance. In a careful study of a random sample of students from two classes at Harvard, students seeking psychiatric help at some point in the four years were compared with their colleagues who did not seek such help. There were no statistically significant differences between these groups on the basis of family background characteristics including education, occupation, and ethnic group. There were no differences on the SAT scores, past academic performance, or predicted academic achievement at Harvard. The evidence strongly suggested that being bright did not in any way predispose a student toward emotional problems.

What can be stated with assurance is that the brightest students, as well as the less well-endowed, will develop emotional disorders if interpersonal or intrapersonal conflict becomes severe. One can still say that intelligence is not an emotional handicap. It can also be said that having psychiatric treatment is not an intellectual handicap. Funkenstein<sup>2</sup> has studied 30 Harvard College students who had psychiatric treatment in college and were subsequently admitted to Medical School. He found that their records were equal in all particulars to a control group of equal academic ability



who had not had treatment. One in each group did not graduate.

Studies of student activists show that most of them are excellent students with a high degree of social conscience<sup>3</sup>. Some of their number, however, illustrate a form of dropping out which differs sharply from the usual ones. It is based on an almost total rejection of the values upheld by members of the middle class, particularly by those who consider their basic social orientation as liberal. The typical members of the group to which I refer might be described as those who have adopted protest as their primary activity. Before discussing them, a further definition of the liberal point of view is desirable.

A liberal has been defined (by Senator Joseph Clark of Pennsylvania, I believe) as one who believes that the full influence and force of government should be used to improve the social, economic, and health conditions of its citizens. Liberals have a high degree of faith in education, and in the possibility of moral advancement through the rational use of intelligence. They usually have strong sympathy for the underdog in any given situation, although they do not assume that because he is the underdog he is superior to those who may be exploiting him.

Students who concentrate almost exclusively on protest, from whose ranks too many dropouts are now coming, seem bound together by strong feelings which they seem unable to express or define, but which are readily communicated by nonverbal means. At the 1965 Arlie House Conference on Student Stress, those students who expressed strong feelings in an incoherent and nearly irrational manner seemed to be the best understood by their fellows<sup>4</sup>. They seem able to define themselves only in opposition to middle-class values and customs. Their protests, appropriate and desirable as many of them are, have not been followed by programs for constructive action.

Many of them are genuinely concerned over social injustices but are willing to exploit others and be totally parasitic on society. Their attitudes are characterized by great moral sensitivity in some areas, and equally gross moral insensitivity in others. Putting strong emphasis on peace, love, brotherhood, and sharing resources, they appear bent on shocking those with whom they disagree (mainly their parents and other members of the older generation) by their appearance, sexual customs, drug usage, disdain of work, and disregard of principles of sanitation.

Those of us who work in college psychiatric services note that many of these people are struggling desperately to cope with their personal emotional problems. In working with them we note a strong tendency to try to find quick solutions, and the salesmen for panaceas are ubiquitous. As their problems grow, and the inappropriate attempts at solutions compound them, many students have to leave college, some in the worst possible mood to make constructive use of time not prestructured for them.

Members of this group are sometimes not well disposed toward making use of psychiatric help; they tend to consider it as some kind of gimmick, and to select as alternatives taking hallucinogenic drugs, or joining some cult, hoping the problem will go away.

Our quite considerable dropout rate reflects a central fact about education. There is in America an assumption, generally overemphasized, that college is a positive good for



most young people. It is time to call this belief into question. It is clear that for many young people there are attractive and effective alternatives to college—and certainly to a conventionally structured four-year academic program. Strong pressures are put on students to get degrees, and there are implications of failure and disgrace for those who do not. But for those bright and creative people whose talents and interests are not primarily those demanded by college, an academic degree program is a waste.

And for bright and creative people who *can* benefit from a college program, but whose individual psychological, maturational, or intellectual patterns demand other than a conventional or normative approach, allowance must be made. Dropping out often constitutes such an allowance—a chance to re-assess, catch up, take a rest. We must remember that the decision to drop out usually involves soul-searching and the pain of defying strong external pressures. Often it would be easier for students to remain in school. But in most cases their choice is a useful one. Large numbers of dropouts return, and a significant proportion of these report two gains: growth of general confidence and greater sense of vocational direction. The so-called dropout problem is a misnomer. Those of us who are in education are involved in the problems of youth—learning, constructing an identity, and working effectively—and we must not be led astray by false issues.

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# The Reflections of





# DON MIGUEL

## De La VANCOUVER

by Michael R. Harrison '69

**T**HIS chronicle of adventures and reflections is compiled from notes found wadded up inside a syringe sent to John B. Stanbury's '39 lab at MIT from Tocachi, Ecuador by a comically crazed medical "squire." This same HMS II summer refugee\* had packed off several months earlier to live and work in a tiny, primitive Indian and mestizo village isolated high in the Ecuadorian Andes where Dr. Stanbury's group was studying the effects of injected iodinated oil on endemic goiter and the presumably related defects of deaf-mutism, mental deficiency and cretinism. The diary itself resembles nothing so much as the lucidly deluded reflections of that great knight errant—Don Quixote de la Mancha. And indeed, the crumpled manuscript was signed "Don Miguel de la Vancouver†" and was filled with allusions to "the peerless lady, Donna Gretchina del Dunthorpe§," strongly suggesting that the author—like the valorous Don Quixote—had "flipped out." Excerpts from this improbable document should be taken *cum grano salis* as the work of a mind violently wrenched from its firm scientific Harvardian moorings—floating free (or half submerged) in the realm of madness.

JUEVES 6 JULIO

Our little kerosene stove is lighted—no mean trick when the quality of the kerosene that reaches La Esperanza is such that it must be heated almost to boiling before it even imitates flammability. Gretchina is boiling my one filthy pair of jeans in hopes of blasting out some of the ubiquitous

\* Supported, as usual, by his wife (the charming Donna Gretchina) and by the Goldberger Medical Student Research fellowship awarded in honor of William B. Castle '21 by the Nutrition Education Committee of the AMA Council on Food and Nutrition. Mentor: Dr. J. B. Stanbury, Professor of Experimental Medicine, MIT

† Vancouver, Washington

§ Dunthorpe, Oregon

dust, seeds, stalks, mud and excrement picked up during our first week of work in La Esperanza from the dirt floors and fields of the pueblo's frighteningly numerous cretins, deafmutes and idiots. I have opened my cheap and foul "Brandy Lima Sec" and assumed my Ernest Hemingway pose at a traumatized three-legged desk in the dusty corner of our decrepit peeled-plaster room—settled in after an exhausting day trudging fully 10 miles up and down these steep desolate hills, ravines, and fields in our "hut-to-hut" examinations of the village's pathetic defectives. (But while I warmed up to the task of setting down some initial impressions, the prompt Equatorial night has fallen and I must fire up the gas lamp or find a candle.)

Two weeks ago we arrived in La Esperanza in the black of night after a hair-raising, bottom-bruising, cliff-hanging four-hour ride over what are euphemistically called Andean highways in the tiny Toyota pickup of our new friend "Natcho" Ramirez. He is the almost-graduated Ecuadorian medical student who, under a grant from the National Association for Retarded Children, has lived in and studied these poverty-stricken, god-forsaken pueblos as the dedicated right hand man of spectacular Dr. Rodrigo Fierro, our gracious host and imperious mentor in Quito. Natcho told us of La Esperanza and Tocachi—2,000 undernourished, inbred, isolated, goitrous Indian and Mestizo villagers, scattered over 40 miserable miles of rugged Pisque gorge smack on the Equator 9,500 feet up in the mighty Andes. Of these 2,000, seven percent were deaf mutes, four percent mentally deficient, and one percent full blown cretins. The infant mortality rate was forty percent.

DOMINGO 9 JULIO

Sunday mass in the incongruously large grubby-splendid church which dominates the surrounding mud-hut dotted fields has a singular importance here. It is not only an occasion of religious "instruction" and social exchange but

also the only mode of disseminating or gathering news in a village of widely scattered family plots where there are no phones, no newspapers (and few who could read them) and little contact with the outside world. And somehow on this first Sunday—through a truly comic language mix-up between the jolly, little padre and myself, I ended up on the altar fumbling pathetically but earnestly through a Spanish liturgy in front of the assembled villagers. The priest gave an eloquent sermon, apparently about “El Doctor” and the project, throwing in a few kind words for us and a gentle appeal for cooperation. This was quite effective. As I left the church to join Gretchina and Ramirez, I was surrounded by a curious and amiable crowd and presented with a young girl to cure, as everyone eagerly described and elaborated her problems. All eyes were on me as I fiddled around with her hands and feet asking her questions in clumsy Spanish. Then as the suspense mounted, I looked very serious and thoughtful (because I was too confused and bewildered to make the obvious diagnosis), said a few serious, thoughtful doctorly words to the Padre, and asked the girl to wait in the dispensario for a complete examination. Everyone seemed satisfied, and as I caught up with Ramirez he casually noted that the girl had rheumatic fever. We later found the classic signs and murmurs. My first case.

## MARTES 11 JULIO

Our search-and-examine team is a traveling circus: Senor Medardo—local inside man, village confidante and pleasant companion; Senorita Aida—city girl, midwife to La Esperanza and recorder of histories; Gretchina del Dunthorpe—blond darling of La Esperanza, spirit-lifter and recorder of the physical findings; and myself. It is this motley crew that has scoured the widely scattered mud and straw huts around La Esperanza gathering data on the cretins and defectives.

## JUEVES 13 JULIO

Today we ran across an interesting and puzzling case. Instead of the stupified (hypothyroid) lassitude of the typical cretins we are now accustomed to, this little 5-year old boy was a hyperactive, irrepressible, incorrigible fireball. The examination was a study in frustration. The upshot was the possibility of mongolism. Although he didn't have a mongoloid facies or prominent epicanthic folds, he did have the single transverse palmar crease, large low set ears, curved little finger, large protruding tongue, and excessive salivation, as well as a strange oversized big toe, continuous fidgeting activity, and athetoid thumb-tapping movements. The infant girl that the mother carried on her back (the ever present back-pack burden of all women from 13–45 in this struggling pueblo) had a mongoloid look with epicanthic folds, deformed ears, but no transpalmar crease. It was impossible in two hours of testing to clearly distinguish the boy's manic hyperactivity and inability to cooperate from mental deficiency, but I suspect he is very deficient. And to complicate matters, the boy has been epileptic since he fell on his head at age two. He has several severe convulsive attacks on one day about once a month, each followed by increased hyperactivity. I'd like to do my insulin-growth hormone study on this boy later—I've talked to the mother about it. But, I'm afraid hypoglycemia would be a little risky in light of this epilepsy.

It is quite a shock being “el doctor,” called on to help people, expected to do something for them. After the dramatic examination at the church doors, villagers have appeared at the clinic with bronchopneumonia, T.B., impetigo, cystitis, nephritis, machete wounds, broken ribs and the interminable bronchitides and infections of the innumerable filthy and irresistible “ninos.”

Is it possible that I, Don Miguel de la Vancouver, can feel so useless and ill-equipped? Every time someone comes with a problem, I think about the chapter of Harrison in which this-or-that disease was discussed, what some professor said about this or that symptom, what theories have been proposed—and feel lost without books or notes for some simple things—like diagnosis and treatment. Senorita Aida, the midwife, usually ends up making a pragmatic “snap” diagnosis, searching the pathetic gratuito supply of drug samples for “something close,” and giving a shot or writing a receipt (prescription) for something from the nuns' little farmacia.

## DOMINGO 16 JULIO

I received three eggs from a poor old ragged tuberculous woman who came to the dispensario yesterday with some strange complaint, and while I was looking in her eyes, or something equally academic, the midwife walked in and diagnosed cervical CA from the smell in the room. Again and again the midwife treats our patients empirically but effectively.

## MIÉRCOLES 19 JULIO

Dr. Ebert may have something in his rethinking of the problem of medical care and medical manpower. Midwifery and a little “empirical” medicine is not such a bad thing—especially when you start with nothing, with a population crying and dying for medical care of any type. And, in the last analysis 90 percent of the effective medical care that could be made available to these people could be done by a midwife—is done by a midwife. And for the 10 percent of problems that are not simple infections, cuts, colds and pregnancies—well, they're in a fix. But if 100 percent care is out of the question because total training of good doctors for the last 10 percent is outrageously expensive and time consuming, it still might be a good idea to get that easy 90 percent with some paramedical personnel.

## VIERNES 21 JULIO

When I consider my “research project” in the light of these first medical encounters with the villages, I have to chuckle at the perspective I have. These people don't need their blood (which they are very, very reluctant to give up) analyzed by some fancy radioimmunoassay for minute amounts of growth hormone secreted in response to insulin-induced hypoglycemia; they need some penicillin in the butt, some dressings for their machete wounds, some shoes for their rock-hard calloused feet, and for God's sake some sanitation. But then again maybe the overview is important, maybe this intense endocrinological study will produce some answers, maybe these exhaustive examinations of the many



hideously defective idiots, deafmutes, and cretins will pay off in the long run—for these people. The old chestnut again, research or practice, the larger problems or the immediate problems—both to relieve this interminable suffering.

#### DOMINGO 23 JULIO

Acabado: The first big block of work is finished. We climbed five or six miles up into the far isolated “campos” above the church to examine four more defective persons, bringing our total to 34. We also found two delinquent mothers who hadn’t brought their ninos for “radiographique”—we are doing hand x-rays for bone age with a little portable, gasoline engine powered x-ray machine. This afternoon I reviewed all the examination data, wrote up my remarks and critique, and indulged in my first Ecuadorian beer—truly grand stuff in big, big, bottles.

The reason I pushed so hard to finish this first phase of our work is to have time to explore the Rio Pisque, the river whose mighty gorge baffled our attempt to reach it in an all day assault last Sunday, an adventure which bordered on disaster when hearty little Gretchina almost “decompensated” on that torturous all day hike. I was frightened—she was a hairs breath from heat stroke on those blistering cliffs in the most utterly god-forsaken and inaccessible crags of that rugged and rutted gorge. But tomorrow we arise at 3:30 AM and take the so-called autobus two hours down that unmarked dirt backroad to where the gorge opens up enough to allow descent.

#### DOMINGO 30 JULIO

This morning we sat in a rear pew and watched the show. The villagers assemble quietly outside the church until the padre gets around to beginning the mass. The fervent rag-tag women with their ever-present babies on their backs and at their ragged skirts move their lips in numbed “aves;” the gnarled placid men slouch casually along the walls; the nuns alternately kneel in prayer and bustle importantly and piously among the schoolchildren; the dirty barefoot older children sit in the aisles playing marbles and giggling; and the village mongrel dogs wander about the church sniffing the gaudy Spanish images.

For the mass here, like Latin Catholicism in general, is something of a fervent distraction. The images are more vivid, more sentimentalized, more blood-and-gutsy to make the distraction more real, simple and earthy; for this raw, immediate, living-mating-working-dying life does not foster a high degree of ascetic sophistication. But the distraction may be a good one. Rather than turning inward with constantly disturbing and compelling Puritanical introspection, Spanish Catholicism simply relegates all moral and philosophical matters to a benevolent “Senor,” accomplishing a grand projection (and dismissal) of all anxiety producing problems onto a beautifully simple, firmly established heavenly order. The sophisticated and cruel introspective drive that spawns rigid laws, witch trials, and progressive, successful, ulcer-ridden industrial societies is replaced by a simple relegation of all troublesome “ethical” questions beyond the power to alter or amend by human will. Once the church is built, the images placed, the priest and nuns paid, revered and supported, the whole of heaven is benevolently disposed. So the people—happy in their poverty, illness, and back-breaking

labor because “God is in His Heaven,” can concentrate on living, breeding, bearing and raising children, growing old, and dying.

#### LUNES 31 JULIO

Yesterday we wanted to find all the defective persons we had missed in our weeks of hut-to-hut examinations. But it was raining and ol’ Medardo, the good humored, well-respected, somewhat unreliable but indispensable village “in-man” did not show for our afternoon forage into the hills. Last night the jolly little padre—in the course of a discussion of the huge live eagle he had bought from a local hunter and was keeping tied by the leg outside our door—offered the obvious explanation for Medardo’s delinquency. He and his cousin, the director of the school, were “mucho felice” in the solid tradition of Sunday mass, quiet morning and all day drunk. Now Medardo and “El Director” are the two characters who really take my fancy here, both for their truly striking facial features and for the respect and friendship they command in the village. Was this my opportunity really to feel the pulse of this life, to get into the home among the children, animals, women and dirt? I stuck a bottle of lime brandy (Ecuadorian techilla) under my coat and set out to see what I could see. It was 6:30 by the time I climbed in and out of the valley that separates the church from the little cluster of huts where Medardo, the director, and another bearded cousin were piling up empty bottles. I immediately presented them with my gift, smiled knowingly, laughed with them, and took the beer that was cheerfully offered. There it began—with the women quietly coming and going, the innumerable village kids crowding around, playing on the dirt floor, or sleeping, the single candle fluttering cheerfully, the warm domestic smells of animals and women and children locking out the cold, and the three laughing men and their “gringito” amigo gathered around a small table smoking and drinking, talking excitedly, gesticulating dramatically, slapping thighs and backs amid the outbursts of good belly laughter that punctuated the endless flow of pleasant conversation—the impediment of the “gringito’s” poor Castilian well compensated by the communion and communing of well-disposed and well oiled companions.

#### JUEVES 3 AGOSTO

I saw Medardo for the first time since the infamous Sunday night beer and brandy joust. His wife came to the dispensario on Tuesday to tell us he was suffering terrible “dolores da la cabeza” since Sunday and I sent her back with some of my aspirin and codeine. Today, Thursday, I witnessed the aftermath of our bout—a colossal three-day hangover—fitting tribute to his performance. From Medardo’s warm manner and other subtle indications throughout the village—conspiratorial smiles, warm handshakes, and a few shoulder slappings—I gather I gained something with my rather unorthodox approach.

#### SABADO 5 AGOSTO

Thus ends the second horrendous day of my insulin-growth hormone project—a study in the interminable problems and frustrations of trying to take a sophisticated study into the field. We had planned to take this pituitary function test, growth hormone response to insulin-induced hypoglycemia, right into the cretin’s huts in order to obtain

truly basal conditions by catching them before they got up, exercised, or ate—an academician's pretty protocol run aground on the hard rocks of practical experience. The problems? First of all, this test is difficult and hazardous even in a hospital setting due to the severe hypoglycemia (at least 50% fall in blood glucose) necessary for a good growth hormone response. Secondly, it requires a great deal of equipment: "sterile" syringes and needles, tubes and pipettes, tourniquets and alcohol, reagents for the first steps of the glucose determination, vials of emergency hypertonic glucose as well as an IV glucose drip set-up—all of which mean a fantastic mess when there is nothing but a dirt, dust, and spittle floor, with no tables, chairs or even level ground. Then there is the overwhelming problem of asepsis. Although we tried like hell with our boiled glass syringes and old dull needles (no beautiful sterile plastics here), it is impossible to keep equipment "sterile" on the filthy floor of a dark, candle-lit hut while blinding dust swirls through the incomplete mud walls and settles musty thick on every object. We've learned—this type of exam is clearly too hazardous to continue.

The real kicker is the people's deep seated fear of blood-letting. These wonderful, simple, superstitious people have been exposed to absolutely nothing modern (or medical) except hunger, disease, and bad times; and to them "sacar la sangre" ("to take the blood") is something so awful, fearful, and diabolical that to mention it is to strike suspicion, fear and mistrust into their very souls. Since each examination requires four, timed blood samples plus IV insulin injection, our work is something less than popular.

This morning, we talked a father and mother (whom I had painstakingly groomed for a month) into letting us examine one of three interesting deafmute mentally deficient daughters. Between nightmarish attempts to get the correct samples from non-existent fragile veins, I ran to make the final arrangements at the hut of Maria Elena—a classical cretin we had planned to examine later. I had carefully prepared the family. They appeared "agradable," told me she had not eaten, and helped me prepare a place for the examination. But after I dashed back to the first house, one of the diffuse household happened by the home of our first patient, heard from the parents about the horrors of the intended "sacar la sangre" (although the girl examined didn't mind it at all) and apparently returned home with the word. When we arrived for the second examination, the entire household had vanished, the prepared examining place had disappeared and Maria Elena had been put back out in the corner of the field she had shared with the pigs for 40 years.

Although this fear is irrational, frustrating and childish from our point of view, it is becoming abundantly clear that this deep-seated, irreducible "gut reaction" is not accessible to our reasoning or argument.

DOMINGO 6 AGOSTO

I think I will make a fishing pole rather than scribble tonight. But I cannot help noting that as far as our growth hormone project is concerned, this was our first reasonably satisfying and rewarding day. We gave up the "in-hut" examinations in favor of bringing the subjects, by truck or on our backs, to the dispensario. Today we brought Maria

Cuzco in Ramirez's truck and carried Pedro Simbana across the fields from his hut in a blanket. We have good tests on both these classical cretins, although we had to terminate Pedro's with IV hypertonic glucose before the full 90 minutes.

I can't quit without trying to convey the overpowering impression I received from my 1½ hour vigil with Maria Cuzco in her lonely straw-roofed, mud-walled hut from 5:45 to 7:15 this morning. Since there is no way to communicate instructions to a 3½ foot, 40-year old deafmute, mentally deficient cretin, I had to be at her house at the crack of dawn to restrain her from getting up or eating until Ramirez arrived from Tocachi.

It is unreasonable to ask anyone to imagine a more sad and empty and meaningless picture of life than this creature presented. She got up off the hard dirt floor where she had spent a frightfully cold and blowy night under some potato sacks, wearing the same filthy rags that she had lived and slept in for years, wiped her mucus covered nose, mouth and face with her filthy "dress," and stared unknowingly at the familiar valley and distant hills and horizon. On that distant horizon would sporadically appear a tiny red or blue poncho struggling up to the high fields as the brilliant Equatorial dawn broke across the blue, blue sky—magnificent! But for her? I wondered if beauty or joy were ever reflected in those dull, sad eyes. (Yet I once found her combing her thick, dust-caked black hair and saw, or though I saw, a smile cross her sad moronic face). She became impetuous and bawled piteously when I wouldn't let her tend her donkey and start her day's slow, dreary, hypothyroid labors.

What a picture of life! And to imagine that this same lonely, cold, dreary, empty scene occurs every lonely, cold, dreary, empty morning of the year. Life or survival? Maria Cuzco, of course, is an exceptionally good cretin. She can do simple field work and feed and dress herself. Even more amazing is the mere survival for 40–50 years of the Maria Elaina Toapautas and Pedro Rafael Simbanas whose "life" consists of lying in one dirty corner 24 hours a day, 365 days a year, sleeping, groveling, defecating, laughing piteously and crying hideously—unable to move, hear, speak, understand, or even feed and dress themselves. And what about the family that feeds and clothes this hideous mockery of the divine image for 50 years?—never, never questioning their duty to preserve this life, a life I suppose they consider beautiful before God. He is theirs, and if you think they don't care, try to examine him or even mention "sacar la sangre." I can't help thinking what a remarkable thing it is for an utterly poor family—a family that must devote all the daylight hours to producing enough corn to keep body and soul together, that must breed and feed prolifically just to survive the extinction threatened by a +40% infant mortality—for such a family to feed and care for a monstrous vegetable for 50 years. Civilization might still take a few pointers from humanity.

MIÉRCOLES 9 AGOSTO

A new chapter of our life in Ecuador has begun—the Tocachi chapter. Our time here is limited as the September 5 return to medical school approaches. And I suspect there will be little time for anything but work here, for we must now plunge into the insulin-growth hormone examinations. My



impressions of life in Tocachi will necessarily be colored by our more extensive experience in La Esperanza. La Esperanza and Tocachi are much alike, and there exists a strangely "comique" rivalry between these neighboring geographically, sociologically, and economically similar sisters in poverty and isolated oblivion. My first impression is that the only thing the Tocachians have to throw up to the slightly more "urbane," less isolated La Esperanzans is the two hours of diesel engine electricity which lights a few central houses every evening.

#### VIERNES 11 AGOSTO

The excitement of work! Now we are going full bore on my project and the days are crammed with medical adventures. Yesterday was typical.

We initiated our Tocachi study by trying to do insulin-growth hormone exams on five cretins in one morning—bringing them to the dispensario in our little truck, weighing them for insulin dose, calculation, stretching them out on the floor, getting basal blood pressures and pulses, drawing the basal samples, and injecting I.V. 0.15 units crystalline insulin per kg body weight. We had four cretinous patients going at once, and our hands were full. We were running from one to another anxiously monitoring pulses and neurologic signs (they are all deafmutes, of course) for dangerous hypoglycemic reactions (difficult because we need a good chemical hypoglycemia with sweating, palpitation, and tachycardia for a significant G. H. response), when one young boy, Vicente Castenada, began to convulse on the floor! Thank God we were prepared—in no time we had the emergency hypertonic glucose in a syringe, in a vein, and in his brain. And thank God for Vicente's good veins—the anticubital was difficult enough with the convulsions, the jugular would have been hell. Meanwhile, his sister was showing dangerous neurologic and psychic signs. Her non-existent veins could have been trouble, so we stopped her early with p.o. sugar-water-orange juice. By the end of the morning everything had worked its way back to normal, except my traumatized nervous system.

In the afternoon I helped Natcho give general medical attention at the dispensario—treating from our pitiful drug sample supply the usual spectrum—bronchitis and trauma to T.B. and a baby with congenital hernias and an umbilical hernia to boot. But the clincher was the candle light delivery that occupied us into the wee hours. A hombre came to Natcho's at rack time (8:30) and led Natcho, Gretchina (she didn't want to stay by herself) and me through the blackness to a dark mud-walled house. We found the expectant mother in the throes of her labor, writhing and groaning on a dirty straw mat in the corner where she was to re-enact the miracle of motherhood. There she was—a deaf-mute, mentally deficient. Her pathetic, slobbering, idiot face called up a vision of the depraved "mate"—unknown and apparently unconcerned, as is the custom here—who put her in this state.

In the course of four hours of candlelight manipulations, a few injections and a lot of tugging, pulling and pushing, we managed to help her produce, in one final agonizing gush, a little wrinkled breathing, bawling Tocachian. Unfortunately, this momentous effort satisfied and relieved mother and uterus enough so they neglected to expel the little nino's

former home, and we had a hell of a time getting the placenta. The wrinkled ugly little "miracle" was quickly bound head to foot in the rigid straight-jacket of the Indians' traditional (and tenaciously preserved) swaddling bands. The mother lay happily in the bloody aftermath of her delivery. The weary "ayudants" struggled home through the Andean night. And another of the endless circles and cycles had begun here in this poor bare house on this brilliant cold night in Ecuador—as everywhere. And the little nina? She will suck warm milk for a few years, ride tied up tight on mother's back in the fields for a few years, play on the dirt floor with the chickens, guinea pigs, dogs, cats and pigs for a few years, mate in the fields and bear children on a straw mat on a cold night in Tocachi—and the wheel will have come full circle. She will have lived. It is enough.

#### DOMINGO 13 AGOSTO

After the usual harrowing morning insulin exams at the consultorio, Gretchina and I (Natcho is not the athletic type) accompanied our new friend, affectionately known as "Senor Un Poco Loco" on a long hot guided-tour hike to Cochasqui. Cochasqui is a desolate, inconspicuous plot of hilly farm land just one big ridge over from Tocachi; but its dusty fields only partially hide the awesome evidence of its past glory—the deep-buried ruins of the mighty Incan Temple of the Sun. The top of this monumental T-shaped temple, where the sweet young Inca virgins were phlebotomized transcervically, looks directly South to the Temple of the Moon in far distant Quito. It is rumored that somewhere under these grain and potato fields lies the fabulous palace of Princess Pasha, mother of Atahualpa—ruler of the entire late Inca empire and Ecuador's Indian George Washington.

Although the gigantic constructions of that towering ancient civilization are impressive, the history interesting, and the search for archaeological treasure exciting, more impressive, interesting and exciting is our exquisitely eccentric companion and his fabulous "Tocachi museum." Our Senor Un Poco Loco is a thoroughly delightful, thoroughly ridiculous, thoroughly cracked nut. And his eccentricity is all the more poignant and refreshing in this non-frivolous, live-and-die, work-a-day world of abject poverty. This tall, awkward, gangling, partially deaf "town character" has collected and hoarded all the "cosas antiguas" that have turned up under the oxen's feet or the Indian's plow or the German archaeologist's spade—finding some, trading with villagers for others and stealing a great many from the scholarly German professors who tried to excavate the temple years ago. Hundreds of literally invaluable pre-Colombian, Incan, pre-Incan and generally ancient pots, bowls, beads, weapons, stones, and symbols, lie heaped in the dusty niches, corners and closets of his ramshackle house in Tocachi—a fabulous Tocachi Museum unknown to the world, to Ecuador, or even to the people of Tocachi.

The flavor of this gentleman's eccentricity dawned on us only with experience. First, there was his refusal to go up on the Temple of the Sun because it was "sacred" and required certain ritualistic preparations. It later became clear that he was not the usual sort of blind-faith Latin Catholic, and in fact evidenced some wildly heretical apostolic and evangelistic preoccupations. Then there was the continuous

barrage of knowledgeable absurdities about archaeological evidence linking "his" ancient Incas to early Egyptian and Indian civilizations. And, finally there was his museum. Bolting all the doors and speaking in a conspiratorial whisper, he cautiously displayed his many truly fabulous objects, among which were: the smooth black Inca symbol which when put in water and rubbed on the appropriate place would cure any illness and heal any wound (he only condescended to Natcho and I as physicians), the wedged shape green stone which when submerged in a certain old Inca pot causes rain; another symbol that tells him when to work his fields; and a beautiful big mottled green lance head which brings knowledge to the person who sleeps on it. Unfortunately, for us and the world, he wouldn't trade a single beloved pot, symbol, bead or stone for all the sucrés in Ecuador.

And who will tell me the spirit of Don Quixote is dead—is preposterous, unbelievable, or fantastic? Is not this Senor Un Poco Loco Don Quixote to a "T"? Natcho tells me that our friend has long nourished extensive empirical knowledge of ancient archaeology, religion, and superstition; and now he lives, feels, eats and breathes nothing but his beautiful objects, his "museum," his temples, and ruins. What the order of chivalry and knight errantry was to the Don, the cult of "Rosa Cruza" and errant archaeology is to Senor Loco. If Don Quixote de la Mancha was tall, skinny, awkward, and toothless, "Don Loco de la Tocachi" is tall, skinny, awkward, and deaf. The Don and his barber's basin helmet and cardboard shield could hardly have been a more astonishing and comic sight than our Don Loco with his big-billed, ear-muffled, leather aviator's cap. And if Quixote had a magic potion that supposedly cured all his battle wounds in two seconds. Loco has a rock with the same function—and it does not have the overwhelming GI side effects of Quixote's potion). But best of all, our Don Loco de la Tocachi, like Quixote, is supremely laughable but irresistibly lovable, thoroughly ridiculous but often with the impossible profundity of genius and madness, wisdom and insanity. And, in the end, our sympathies are with him, with his foolish dreams, his brilliant and hopelessly imaginary world—a world we can only glimpse from our real work-a-day world of science, progress, and growth hormone tests.

SABADO 19 AGOSTO

I'm glad I didn't have time to sit down and write when we returned from this morning's fiasco in La Esperanza. I am afraid I would have vented my anger and frustration by raining curses on this work and this place, by castigating the myriad of little distasteful people who through stupidity, ignorance, or malice frustrate our work.

I won't go over the painful events of this disastrous and traumatic morning. Suffice it to say that after many bitter disappointments and frustrations, culminating in an abortive attempt to relieve my friend Medardo's cystitis-stricken, obstructed, pain-ridden wife without the requisite equipment and medication, we started back along the newly caved-in, pounding, choking dirt road to Tocachi—with all our gear and our work and nothing but disappointment to show for it. A black and silent trip! Natcho highlighted the spirit of gloom, frustration, and anger with the startling revelation that he was considering giving up this project, and with it

his dream of getting a scholarship to study in the U.S.—a dream to which he has dedicated several years of study, an 800-page thesis on the neuromuscular development of hypothyroid and endemic goiterous children, and two years of incredible hardship living with wife and child in Tocachi. He was sick—drained by the continuous frustration and tension of working without the equipment and medicine necessary to function conscientiously as a doctor and an investigator.

But now things have shaped up a little, and I can look back over the last week from a more relaxed and unimpassioned perspective.

Blood is life, and here in La Esperanza and Tocachi the instinctive fear of giving up this blood is as deep-seated and fundamental as self preservation. Somehow this incredible but irrefutable truth evaded me in the moments of profound frustration and anger over my stymied project. But the pieces are falling into place. A few years ago two doctors were killed and mutilated by angry villagers in one of the Southern provinces in exactly these circumstances. And it turns out that several months ago the midwife of La Esperanza quit in fear and anger after an irate husband tried to "do her in" after she drew a small diagnostic blood sample from his wife. And now the comic rumors and stories that circulate among the villagers—that Natcho is a communist, and that Gretchina and I came to steal all the babies and take them back to the U.S., seem suddenly less comic. And the incredible and laughable story that is seething in now explosive La Esperanza—that Dr. Fierro and Dr. Ramirez operate a "blood company" taking blood from the villagers and selling it commercially—seems suddenly "believable" and threatening. It is time to worry a little—about the future of the long term endocrinological study here, and about the all important good will of the people we are trying to help, about the fears, superstitions, values and beliefs which are not quite so comic to them as to us.

The complexion of our work and of this project has changed. Here we move out of the realm of HMS do-gooder doctor-in-the-jungle type dilletantism. It is no longer the romantic struggle against disease and poverty in a primitive village; it is no longer the idealism of that impossibly romantic reward of three eggs brought to the dispensario by a little old rag-tag tuberculous lady. This is where we romantics pale. This is where the quiet heroes—the unpretentious, patient, undramatic softspoken Natcho Ramirez types take over.

DOMINGO 20 AGOSTO

Penultimate day of the Tocachi adventure and the first anniversary of the betrothal of the peerless Gretchina del Dunthorpe to Don Miguel de la Vancouver—and a day to be remembered for reasons unrelated to this great feast day.

Despite the lingering reminders in legs, back, and bottom of yesterday's all-day horseback ride up the towering slopes behind Tocachi and La Esperanza, over the 14,000 ft. crest and down into the three inaccessible, gorgeous, trout-laden Mojanda Lakes, and despite last night's late vigil with a young lady-in-waiting who just couldn't get her first child through a small pelvis, Natcho and I arose early in order to perform the last insulin-growth hormone exam on a much-



needed "normal" control volunteer. We were apprehensive because we had seen our volunteer in the street the night before drunk and looking like a dubious prospect for the morning—for even this big, strong, healthy man was not exempt from the ingrained fear of "sacar la sangre." Our suspicions were confirmed when, after checking our still undelivered and long overdue lady-in-groaning, we hiked to his house to find the doors bolted and everyone in hiding. The day boded ill.

Morning came and went as we watched and waited with our problem mother, and the pediatrics control examinations scheduled for that quiet Sunday morning had to be neglected. As the afternoon wore on with little progress, we caught a quick lunch and started an I.V. drip (no mean trick in a mud hut) for controlled pitocin administration. Although the rather intense labor quickened in tempo, there was little progress in thinning and opening the cervical os.

While Natcho monitored the frustratingly slow developments here, I slipped out several times to hustle through some last day projects. The first was to hike into the fields far below Tocachi in search of Mishque—a foul liquid collected from gutted Pencos plants (like Tequilla in Mexico) and consumed by every villager from weaning on as a primary caloric source, and Jaranga—the exceedingly potent and possibly toxic product of Mishque, sugar and time, consumed as "Tocachi champagne" on holidays, feast days and round-the-clock drunks. Both Mishque and Jaranga are accorded remarkable healing properties (especially anti-rheumatic) in local folk medicine. I wanted to take some of this foul, dirty, fly and bug-speckled home-made foodstuff—liquor-panacea back to Boston and analyze it for steroids or steroid precursors and check it for goitrogenic and thyroid blocking properties (also for cocktail parties).

Then it began: I returned to the house of our expectant mother to find Natcho nervously watching, palpating, listening. He was worried. Night was falling, our young patient had been in her exhausting agony for almost a day, and things were clearly getting desperate. The uterine contractions were now frequent and forceful, the os was ready, but she just couldn't deliver. The hours wore on, the fetal heartbeat stayed strong, but the mother was deteriorating—and still our little friend wouldn't come. Things looked bad. More pitocin—I.M. this time as we had to pull the I.V. out when the violent contractions began several hours before. Then the desperate hours of supreme effort—Natcho pulling from below, me pushing down with all my strength on top of the tortured uterus which filled her abdomen (dangerous but necessary here) and the woman screaming, crying, trying—all three of us sweating and praying and whispering "venga, venga, por Dios" with each agonizing torturous contraction. The sweating, writhing, whispering struggle reached one crescendo after another—and with each exhausting crescendo it became more desperate. It was getting late. An episiotomy might help, but no local anesthetic! Two murderous contractions later we decided, and in the next convulsive wave there was more pain and a sharper cry as the perineum was incised. Another hour of desperate crescendos. It was now abundantly clear, although neither wanted to say it, that our baby was not going to make it through that pelvic portal to life. The alternatives: forceps might do it—we had none; Caesarean may be the only answer, but we had no anesthesia, equipment

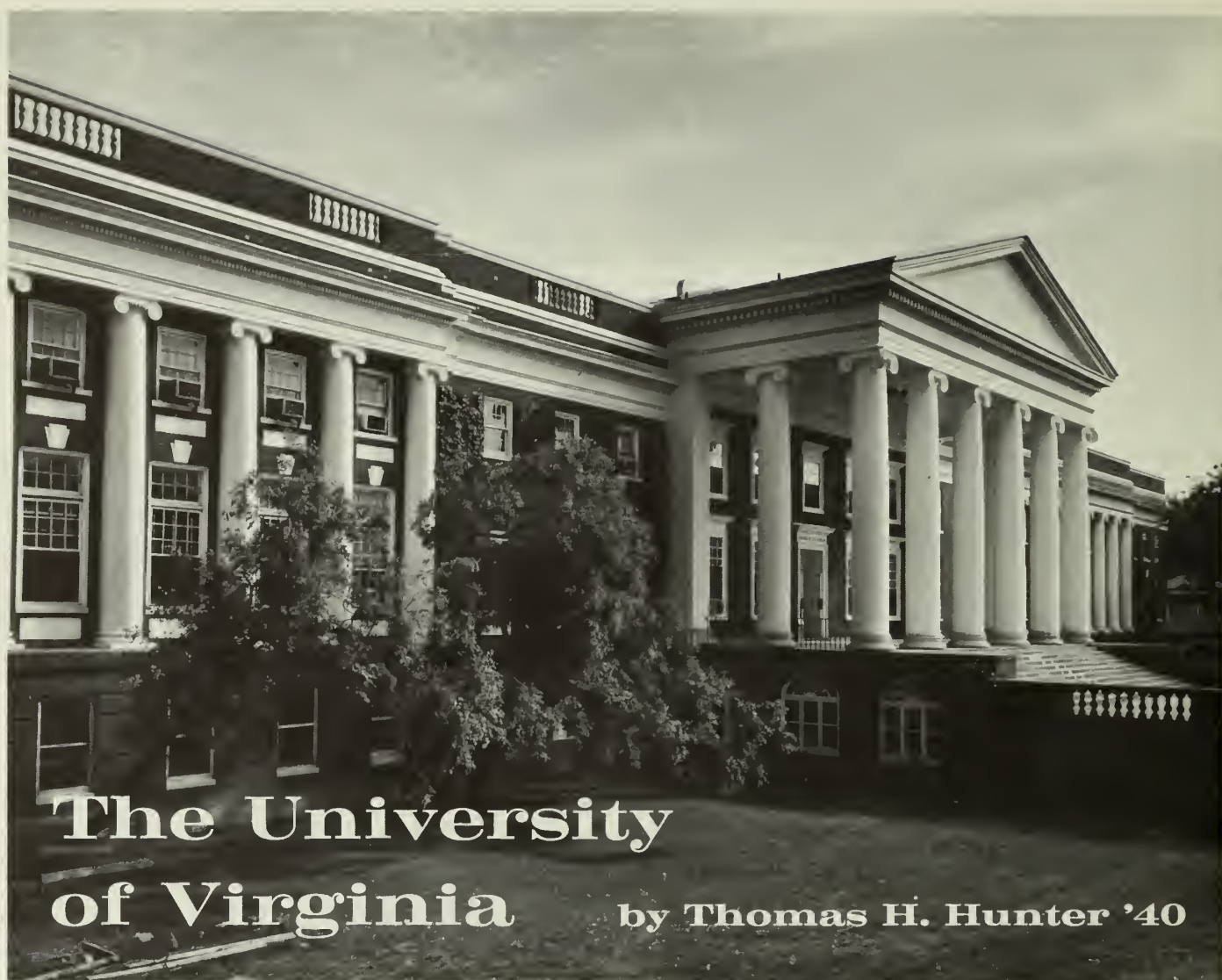
or antibiotics, clearly impossible here, but perhaps at the little hospital 1½ hours down the black rugged mountain road in Cayambe. The obvious third alternative pressed, but neither of us could face that. One look at our poor patient, and it was decided. We moved rapidly. I swept bloody blanket, writhing mother and trapped infant up in my arms, ran out into the night and tucked her into the cab of Natcho's tiny truck. Husband Manuel and the wonderful young Indian woman friend jumped into the open pickup bed. Natcho snatched up our emergency equipment (hedging against a front seat delivery), jumped in on the other side, and set the little truck flying, bouncing, careening, precariously along the treacherous mountain road to Cayambe.

Husband and friend could only peer helplessly through the little rear window on the contorted agonized face of the woman in my arms. They could see her soul jump into her eyes at every sharp jolt and bang. They could see her thrown against roof and door in the height of her labor pain as we hurtled headlong through the cold, black, empty night.

One hair-raising hour later we were in Cayambe, then at the little run-down "hospital" and then in the little partitioned-off delivery room. Our patient was on the table being prepared, and the little nuns were bustling around excitedly. We said Caesarean—but the doctor was in Quito. Natcho knew the "theory" but had never seen it, and I had only the roughest idea. After some confusing transactions, the doc from a neighboring village showed up. We collapsed in relief—the mother was still strong, the fetal heartbeat was still good, and this pleasant, confident, jovial doc assured us there would be no problem delivering the child with forceps.

We were suddenly very hungry and very tired. Despite Natcho's almost continuous coughing, sneezing and increasing misery, we waited so the husband and friend could go back with us, because they had no money and no place to stay. I wish to God we hadn't. After 20 minutes of this doctor's work, Natcho murmured "Let's go outside—do you understand—I feel very sick." And he was sick, for he had divined what I had not; it was another half-hour of heartfelt taciturn conversation in the cold night before we heard and saw the outcome. The nurse with the little bundle didn't stop for the proud father, but bolted with several nuns and Natcho and myself in pursuit. We tried oxygen because I guess there was nothing else to do. But one look at the blue, battered, crushed head with the caved-in hole under the right ear told us the whole story of this traumatic "forceps" delivery—told us that this otherwise normal, wrinkled little baby would not respond, would not take that first breath that his mother had labored and sweated and cried and suffered and almost died for, all in vain. And then to tell them—poor Natcho. Yes, it was baptized; yes, it was dead.

That night, because the family couldn't afford to come to Cayambe again, we took the baby back with us. It was a long cold, bitter, silent ride back along the black empty road that winds up the Pisque Gorge to Tocachi. In the little oppressive cab Natcho and I—tired and silent and sick to the core. In the cold, dusty back, the faithful friend and the young husband. And in Manuel's arms, wrapped against the bitter cold, a battered blue, hideously mangled dead baby. It was 12:30 when we stopped on a high lonely ridge while the woman vomited onto the cold dirt road—from sickness or sorrow. It was 1:00 when we reached Tocachi. This is our last night. Happy Anniversary.



### The University of Virginia School of Medicine

**N**OT long ago, if one sought a university or a medical school with truly first rate intellectual and physical resources, the choices were severely limited. There were Harvard, Columbia, Johns Hopkins and a handful of others mostly in big cities. But recently the list has grown to include, among others, the University of Virginia. Urban living is no longer a requirement for academic opportunity.

The American South remains stereotyped for many as a sunny region where people eat hoe cake and fat back, the sentimental hang pictures of Confederate heroes beside portraits of ancestors, and where very little of constructive contemporary importance takes place. The picture is obsolete, but it makes loyalty to almost any native son a bit suspect. In this sense—and completely unfairly—the constantly felt and discussed presence of Thomas Jefferson in the University of Virginia is something of a liability.

Just how unfair—and just how modern and dynamic Jefferson is—can be illustrated by the late President Kennedy's graceful tribute to his predecessor when the United States Nobel laureates assembled at a White House dinner in 1962. "I think this is the most extraordinary collection of talent, of human knowledge, that has ever been gathered at the

White House," he said, "with the possible exception of when Thomas Jefferson dined alone."

That versatile genius brought many revolutionary innovations to his new university. Medicine was an integral part from its opening in 1825 when Dr. Robley Dunglison, a 26-year-old Scottish scholar, occupied a "Settee" of Medicine, Pharmacy, Surgery, Physiology as the first full-time medical professor in the country.

Jefferson designed the "academical village" housing the new schools, and these buildings still stand on a hill just above the present Medical Center. He endowed the University with his own breadth of intellect and his clear concepts of academic freedom and individual responsibility, legacies which are especially valuable amidst the complexities of modern academic life.

The University of Virginia was established at Charlottesville to be near the geographical center of the state, and the city—now 35,000—grew as a university and courthouse town, without heavy industry. In the last 20 years, light industry attracted by the University has moved in, with several firms specializing in electronics and engineering. A regional office of the Department of Health, Education and



Welfare opened recently and its office building dominates the downtown skyline. Never very isolated, Charlottesville is only a half-hour by air from Washington, and a luncheon meeting in Chicago and family dinner in Charlottesville are quite feasible.

As state universities go, the University of Virginia is small. The total enrollment on the Grounds in Charlottesville is about 8,500 this year and will nearly double in the next decade. The Medical Center includes the Schools of Medicine, and Nursing, and the University Hospital with over 600 beds. The Medical School class is now 81 and will increase to 104 in the early 1970's when a \$9 million Medical Education Building is completed. Comparable expansion of nursing education and patient facilities is also planned.

The question of size confronts any modern academic medical institution. The legitimate expectations of society for more and better health services, research, educational opportunities, and area leadership are powerful stimuli to rapid and massive growth. But an institution of moderate size has intangibles which may be lost with excessive growth.

It is difficult to talk about these qualities of life without perhaps being maudlin or labeled a sentimentalist. I have in mind such things as the "tone" or esprit of an institution which cannot be measured in dollars, square feet of space, or enrollment statistics. There are elusive qualities in Charlottesville which are nonetheless very real and important—such things as a student honor code which is over a century old, and the incredible beauty of the "Lawn," the University's counterpart of the Harvard Yard. My house has not been locked in 15 years. One has close friends, not just acquaintances, in other schools of the University and can walk to their offices. Race relations are far less troubled here than in many areas of the South or many metropolitan areas to the north. Everyday life in both the community and University retains a strong flavor of graciousness and relevance to the human being, qualities that grow and are nurtured, not manufactured or created by instant formula. To borrow a figure from Hardy Dillard of the Law School, the University is presently achieving a rather nice balance of heritage and heresy. The University necessarily is involved in sizeable expansion in most areas, but its leaders are sensitive to the need for ingenuity in devising new administrative and func-

tional patterns to maintain both individual and institutional integrity.

Though state-supported, the University of Virginia has in many respects the flavor of a private institution. The Medical faculty includes graduates of 28 foreign schools. There is no restriction on admission of out-of-state students, and they compose one-third to one-half of each class. In a five-year period, the entering students were graduates of 91 institutions in the United States and residents of 28 states and the District of Columbia. The present hospital house staff of over 215 physicians includes graduates of 51 medical schools in this country and citizens of 18 foreign countries. This diversity is extremely important in providing quality medical education. Since students, interns and residents generally learn more from one another than from their professors, the cosmopolitan quality of the house staff greatly enhances the tone of the clinical teaching.

For many years the strength of the clinical departments has contributed to the ranking of this school among the top dozen nationally in proportion of its graduates seeking advanced training and entering academic medicine. The departments of Internal Medicine, Preventive Medicine, Surgery, Obstetrics and Gynecology, and Radiology have recently provided half a dozen chairmen for other schools. The University of Miami and the University of Kentucky have as new deans former University of Virginia faculty members, the latter William Jordan '42, an old Thorndike man. Though clearly a loss to the University, these appointments are a healthy contribution to medical education not only nationally but internationally. Our chairman of medicine for 17 years, Dr. William Parson (an ex-MGH resident and disciple of Fuller Albright's) now heads the Department of Medicine at Makerere in Kampala, Uganda.

Meanwhile there is resurgence and modernizing of clinical departments underway. The Department of Pediatrics, under Dr. William Thurman, provides an example of the changes taking place as faculty, funds and facilities become available. At one time a small department almost exclusively devoted to clinical practice, it now has a full-time faculty of 24, extensive research and fellowship programs, and clinical services embracing in addition to the traditional hospital and clinic care, a rehabilitation center and a comprehensive child care program for a rural area.

Analogous changes are taking place with new chairmen in Psychiatry under Dr. David Hawkins; in Preventive Medicine under Dr. Calvin Kunin, another Thorndike man; in Urology under Dr. Jay Gillenwater; in Orthopedics under Dr. Warren Stamp; and in Neurology under Dr. Thomas R. Johns 2d '48.

Even more striking changes have occurred in the basic medical sciences in the past few years. These departments had been small, inadequately housed, and extremely limited in their research and graduate teaching. The coincidence of the retirement of five chairmen within a few years brought an opportunity for bringing in new leadership on a broad front. Recognizing the chance of a lifetime, Dean Kenneth R. Crispell also saw the urgency of quickly obtaining unusually large amounts of money. A new Medical Education Building for preclinical science was on the drawing board, but support was essential immediately for interim renovations, equipment and new faculty salaries. The State of Virginia and the University responded gallantly, but the final piece in the puzzle was the granting of one of the first two Health Science

#### Architect's model of the Medical Education Building



Advancement Awards by the NIH in 1966.

The leeway and flexibility of this \$1 million institutional grant has made it useful far beyond its dollar value. Renewed now for two additional years, it also represents a vote of confidence in this institution. Four new chairmen have been attracted from McGill, Western Reserve and Johns Hopkins to the departments of Anatomy, Physiology, Biochemistry and Microbiology: Drs. Jan Langman, Robert Berne, Thomas Thompson and Robert Wagner. With this new blood and with this support, these departments have grown from 25 to 43 faculty members at assistant professor and above. New research programs are being established, and graduate enrollment has risen from a handful to over 50 doctoral and postdoctoral students in three years.

Along with the growth in doctoral study there has been reorganization of the medical curriculum. The faculty implemented the first major change in 1965, when the fourth year became totally elective. Students may now choose a faculty sponsor and design a custom-tailored fourth-year program. The only restrictions are that the student work in at least two fields and be prepared to take all final examinations. This year 80 per cent of the class are in the electives program. Judging by National Board scores, the faculty need not worry about elimination of prescribed courses. Students who omitted them did slightly better than those who took them. While these findings should not necessarily mean that faculty can also be eliminated, one may conclude that medical students are capable of effective independent study!

Recently the faculty voted to initiate a major revision in instruction during the first two medical school years. The goal of this is a greater role for the student in the molding of his own program of study. Beginning this fall (1968), entering students will complete a core program of pre-clinical science, behavioral science and clinical science courses during the first one and one-half years.

Most courses will be organized along departmental lines with a maximum effort to achieve real inter-disciplinary interchange and to employ clinical correlation as frequently as is useful. During the latter half of the second year, each student will choose a faculty preceptor with whom he will plan and execute his course of study. This may consist of laboratory research, problem solving projects in pre-clinical, behavioral or clinical sciences, epidemiologic or other public health projects, graduate courses, and participation in the sponsor's departmental conferences.

An interdepartmental course in cell biology, taught at the beginning of the first year, and community medicine, an elective course with study and participation in health care delivery to isolated and poor populations were recently introduced. This program exemplifies an important trend for the Medical Center and University—reaching out into the community, which is further enhanced by the statewide regional medical program that is being jointly developed with the Medical College of Virginia in Richmond.

Large questions, of course, remain in curriculum planning: the education of the family or primary physician; the production of more physicians and professionals in other health fields; reduction of formal study time while preserving academic quality; and obligations in international medical education, to mention but a few.

The problems of the information deluge and the application of new technologies to education and research are under

study by several groups at the University of Virginia. The University was one of eight charter members of "Educom," the Inter-University Communications Council which now has over 80 member colleges and universities, and is represented on its board of trustees and two of its task forces. A new Health Sciences Library and Communications Center is planned. The University is also collaborating with medical schools in Virginia and neighboring states and with the National Library of Medicine in developing regional information networks.

A year before the Health Science Advancement Award, the University received a National Science Foundation "centers-of-excellence" grant of \$3,780,000. This established a Center for Advanced Studies in the Sciences that is strengthening such fields as Biology, Chemistry, Materials Science, Mathematics, Astronomy, and Physics.

The synergistic effect of these awards running concurrently has been remarkable. Bright enthusiastic young faculty have come to Charlottesville and started their work with good facilities and little delay.

With superb new life sciences and chemistry buildings, and vigorous leadership in the university administration and state government, truly outstanding changes have occurred in the last five years.

Last year the Center for Advanced Studies was broadened to include English, Economics, History, Government and Foreign Affairs. The University now provides a nearly ideal environment for interdisciplinary ventures. The School of Medicine has several collaborative programs with the Schools of Nursing, Engineering and Applied Sciences as well as Architecture, Law, and Education, and with the departments of Physics, Chemistry, Biology, History and Economics.

As an example, History of Medicine has a bright future at the University with a strong department of History, the presence of several members of the medical faculty working in the field already, the recent acquisition of the Walter Reed papers collected by the late Dr. Philip Hench, and generous grants in the field from the Markle and Macy Foundations.

Finally, this central question for a university: how can its unique human and technical resources be applied to solve some of society's most pressing and thus far intractable problems? The public is looking to the universities for solutions which bridge disciplines and are an invasion of the traditional academic world. These are questions such as nuclear power and disarmament, population and food supply, health care, race relations, and urban and rural poverty.

The collective university conscience is awake to this challenge, and faculty and administration are examining their roles in these regards. Preservation of the central function of a university—a community of scholars independently pursuing and imparting new knowledge—is paramount. The "illimitable freedom of the mind" must not be abridged. But is it not possible to encourage, by various means, a more effective attack on some of these most urgent problems without undermining the integrity and freedom of the academic community?

The university community alone cannot provide all the answers. But a reorientation and broadening of university goals is mandatory. As the University's president, Edgar F. Shannon, Jr., puts it: to develop human resources adequately, "we must emphasize quality—quality according to national and universal, not simply Southern, yardsticks."



# American University of Beirut

by John L. Wilson '39



View from the campus across to the mountains of Lebanon. The Medical Sciences Building is in the foreground.

**I**N the year 1866, when the American University of Beirut was founded, the Middle East seemed a remote and mysterious land to most Americans. It then required six weeks by sailing ship to reach the shores of the Eastern Mediterranean—a distance now covered in a day by jet. The hinterland of the region was little traveled by Westerners and three centuries of Ottoman rule had isolated the predominantly Arab people from the social and scientific developments in Europe and the United States. Turkish control of the area was by this time progressively faltering, and periodic unrest occurred as local chieftains and Western Powers, particularly France and Britain, sought variously to exploit or stabilize the deteriorated political and economic situation.

American Protestant missionaries came in 1823 to Syria, as the present territory of Lebanon, Syria and Jordan was called. Although the population was and is predominantly Moslem, the immediate objective of the missionaries was not to make converts from Islam but to revitalize the local Christian churches. After 40 years of missionary activity, a Protestant community had been established. At that time the American Board for Foreign Missions in Boston recognized the pressing need for an institution of higher learning in Syria if leaders were to be prepared for the future. Accordingly, in 1866 the Syrian Protestant College (renamed the American University of Beirut in 1920) was established under a

charter granted by the State of New York. The College was to be separate from the Mission and under the direction of an independent Board of Trustees. Sixteen students were present when the College opened on December 3, 1866.

The following year, 1867, the School of Medicine was inaugurated with a faculty of two professors and a class of 14 students. The language of instruction in the College and Medical School was not Turkish or English, as might have been expected, but Arabic. The first professors in the medical school were remarkable men—Dr. Cornelius V. A. Van Dyck who translated the Bible into Arabic; Dr. John Wartabet whose family is honored for its Arabic-English dictionary; and Dr. George E. Post who joined the medical faculty in 1868 and later published *The Flora of Syria and Palestine*, a botanical study which remains a standard reference work.

The intellectual and cultural revival of the Arab East is often traced to the establishment of the Syrian Protestant College. It required great courage and perseverance for American missionaries to launch a college in the Middle East in the wake of the American Civil War when the dollar was so devalued that initial funds had to be raised in England. In Syria the Christian community was still numb with shocking memories of the massacres of 1860 during which an estimated 11,000 Christians were killed, 4,000 more died of deprivation, and nearly a hundred thousand became homeless refugees. In retrospect, it seemed an inauspicious time

and place for the founding of an institution of higher learning. Nevertheless, the faith of those who foresaw an important role for international education in the Eastern Mediterranean region has been justified. The Syrian Protestant College has grown as the American University of Beirut into a complex of four Faculties:

	<b>Date Established</b>	<b>Total Enrollment 1967-1968</b>
Faculty of Arts and Sciences	1866	2,221
Faculties of Medical Sciences	1867	557
Faculty of Engineering and Architecture	1951	527
Faculty of Agriculture	1952	185
Total Students		<u>3,490</u>

During the past century the University has awarded over 12,000 degrees, and more than 10,000 diplomas and certificates.

The constructive influence which can be exercised in a developing region by a modern university is well illustrated by the fact that 19 graduates and former students of AUB attended the Founding Conference of the United Nations in San Francisco in 1945 as members of official delegations, and five of them signed the original Charter on behalf of their countries. In 1958 the President of the United Nations was a distinguished graduate and professor of the University.

The students currently enrolled at AUB represent 63 different nationalities although approximately 80 per cent of them are from Arab countries. Students gather from Nepal to Ghana, from Turkey to South Africa. Twenty different religious sects are included in the student body which is about evenly divided between Christians and Moslems.

The faculty is as cosmopolitan as the student group being about 70 per cent from the Arab countries, 25 per cent from America and Europe and 5 per cent from elsewhere. Such an assemblage of students and faculty could meet in few other places except Lebanon, the ancient Phoenicia, where the spirit of tolerance and the tradition of learning make possible this uniquely successful experiment in inter-cultural co-operation and understanding.

Such is the University setting of the AUB School of Medicine. The Medical School (including the University as a whole) is incorporated in the State of New York and operates under the surveillance and jurisdiction of the Board of Regents of the University of the State of New York. The Medical School is an Institutional Member of the Association of American Medical Colleges, and the American University Hospital is fully accredited by the Joint Commission on Accreditation of Hospitals of the United States. In the absence of international accrediting organizations in the countries of the Middle East, the AUB Medical School and its graduates have benefited immensely from recognition by these American agencies. Graduates of AUB Medical School have been able to move freely into training programs in Europe and America and have, in general, performed commendably. This mobility has been made easier by the introduction some years ago of English as the language of instruction, a move sustained by the necessity for students to have ready access to the world literature.

The School of Medicine is joined with other health divisions of the University in a Faculties of Medical Sciences which has the following composition:

<b>Faculties of Medical Sciences</b>	<b>Date Established</b>	<b>Enrollment 1967-68</b>
School of Medicine	1867	222
School of Pharmacy	1871	117
School of Nursing	1905	136
School of Public Health	1954	75
American University Hospital	1905	—
Trainees: X-Ray Technology		7
University Health Services	—	—
Total Students		<u>557</u>

Forty students are accepted annually for first-year medicine after three or four years of premedical college study. The medical curriculum comprises four years of study on the American pattern followed by a one-year rotating internship (required by Lebanese law as a prerequisite to the M.D. degree) in the University Hospital. About half the medical students are from Lebanon and the remainder, with few exceptions, are from the surrounding Arab countries. Clinical studies require fluency in Arabic—the language of the patients.

Undergraduate medical education at the American University of Beirut is designed to prepare a "basic physician" with emphasis on scientific discipline, self-education, regional orientation and community responsibility. Each year 35 to 40 graduates receive the M.D. degree. Considering the staggering deficiency in the number of physicians needed in the Arab Middle East (50,000 more physicians are needed), the contribution of AUB is numerically negligible. Therefore, the faculty have elected to concentrate on the quality and orientation of the program with a view to responding to the requirement for teachers and specialists in the region. Consequently, virtually all AUB medical graduates take from three to eight years additional training in basic or clinical science or both, usually including several years of advanced study in America or Britain.

In support of this philosophy, residency training in the American University Hospital has been developed more intensively than in any other institution in the Arab countries; and the basic science departments of the medical school give high priority to Master of Science programs. The Department of Biochemistry has a Ph.D. program and, in due course, other basic science departments will also prepare graduate students for a doctoral degree.

The objective is to realize fully the potential of the American University of Beirut to educate basic scientists and clinical specialists for a region where some 25 new medical schools are needed with virtually no faculty candidates available, and where the full range of modern medical service must be provided through the team approach to regionalized medical care.

Three questions concern the faculty of the AUB Medical School:

1. Are the objectives, as mentioned above, relevant to the needs of a developing region like the Middle East?
2. If so, what kind of faculty and facilities are required?
3. What are the future prospects for success of the program?

## Relevance

Many hours have been spent examining and re-examining the role of the AUB Medical School in the Middle East. The health situation in the area can be seen at a glance. There is:



Severe shortage of health personnel and facilities in all categories.

Gross inequity in the distribution of health services.

Excessive morbidity and mortality from preventable disorders.

Population growth outstripping economic development.

Lack of funds for health services.

Political instability disrupting the continuity of programs, impeding the flow of people and commerce, diverting scarce resources into military channels and dissipating the energies of the people.

The above description applies to many parts of the world. However, the situation does not seem so hopeless if one compares conditions of today with those of a generation ago in the Middle East. In fact, much progress has been made. The skeleton of a health care system has been laid down in almost every country, educational institutions are developing, and the public is increasingly aware of the benefits of good medical service. Depending upon their social and political philosophy, the nations of the Arab Middle East are either mass-producing doctors by greatly over-expanding the size of their medical classes, as in the United Arab Republic, Syria and Iraq, or are taking a more deliberate approach as in the Sudan where the numbers of students are increased modestly in order to preserve higher standards. At present, there are no medical schools in Jordan and the Arabian Peninsula, although these areas have a combined population of over 16 million.

After studying the various medical requirements of the Arab Middle East, the AUB medical faculty decided that its major effort could most profitably be directed toward exemplary undergraduate and graduate programs suited for the training of teachers and specialists in the basic and clinical sciences for the developing medical schools and health care systems in the region. It is axiomatic that undergraduate and residency teaching should be appropriately related to community health needs and that those trained as basic science

teachers should have a reasonable prospect of employment in the Middle East. No other medical school in the region is better prepared than AUB to establish standards in teaching and medical care. Efforts along these lines are expected to result in the maximum influence of the AUB Medical School on the growth and quality of medical education and health service in the Arab Middle East. Time will tell whether this approach will stand the test of "relevance." The AUB medical faculty are convinced that it will.

## Faculty and Facilities

One of the most common deficiencies of medical schools in developing areas is the shortage of full-time faculty. Full-time salaries are frequently so low that they do not attract full-time teachers in the basic sciences, and the clinical faculty is often absorbed in private practice to make ends meet. Fortunately, a small but able nucleus of strictly full-time faculty is present in every department of the AUB Medical School. The following table shows the progress made in recent years in recruiting full and part-time faculty. By American standards, this is a very small staff. By Middle Eastern standards, it is quite respectable and capable of generating its own candidates for future appointment.

### Full-Time Faculty Members in the AUB School of Medicine with the Rank of Instructor or Above

DEPARTMENTS	ACADEMIC YEAR	
	1962-1963	1966-1967
PRECLINICAL		
Anatomy	2	4
Bacteriology	3	2
Biochemistry	4	5
Pharmacology	2	4
Physiology	2	3
CLINICAL		
Anesthesiology	2	3
Clinical Pathology	3	3
Internal Medicine	11	10
Obstetrics-Gynecology	3	3
Ophthalmology	2	4
Otorhinolaryngology	1	2
Pathology	2	3
Pediatrics	4	5
Radiology	3	5
Surgery	5	4
Total full-time faculty	49	60
Total part-time faculty	32	55
Total faculty (full time + part-time)	81	115

Currently, a new medical center is under construction at AUB. Phase I of the medical center, consisting of a building for research, ambulatory services and academic offices will be completed in late 1968. Phase II of the Medical Center is a 440-bed university teaching hospital attached to Phase I and to be completed in late 1969. Phase III, now in the active planning stage, includes a new basic science building and new health sciences library. Barring unforeseen delays, by mid-1971 the AUB Medical School will have entirely new and enlarged facilities unequalled in the region.

Concurrently, a persistent effort is being made to extend the teaching, research and service aspects of the Medical School's program to the periphery of the community through cooperation in development of national health care facilities.

The new Medical Center under construction.



The new Medical Center is envisaged ultimately as the hub of a regionalized system of health care within which medical undergraduate, graduate and postgraduate teaching will take place at all levels, and in connection with the training of other categories of health personnel needed in the community.

It has been AUB's experience that establishment of working relationships between medical schools and ministries of health is one of the most important steps to be taken by medical educators in developing countries. The traditional aloofness of medical faculties from those responsible for the delivery of health services is difficult to overcome even in the government medical schools of the Middle East. Nevertheless, progress is being made because medical educators in the region recognize that scarce national resources must be used in the most efficient manner to meet the urgent health needs of the public.

## Future Prospects

Over the past century the American University of Beirut has weathered many storms in the Middle East including the dissolution of the Ottoman Empire, two world wars, mandates, occupations, and the struggles for independence which resulted in the emergence of independent Arab States in Asia Minor and North Africa. Recent decades have been no less eventful as the upward course of economic and social development has been interrupted periodically by revolutions, ideological conflicts, civil insurrections, and the violent partition of Palestine followed by the Suez and June 1967 crises.

No "foreign" institution could have survived these stresses. The AUB has done so because it has invariably identified itself with the idea of progress through peaceful, constructive change and non-partisan, humanitarian service. The School of Medicine, like the University as a whole, has undergone a process of continuous adaptation to the realities and aspirations of Middle Eastern society. About 95 per cent of the medical faculty (including the Director) and all the students are native to the region. The small number of expatriate physicians on the staff provide an indispensable bridge for ideas and for a dynamic international and intercultural exchange without which vitality and purpose would ebb. The objectives of the School are universal and supranational, and the approach to problems is based on cooperation and a professional spirit. As a result, the institution is viable and eminently useful in a world where isolationism is outmoded and open doors and open minds are the best hope for the future.

It needs little insight to comprehend that both the Middle East and the West derive immense benefit from a mutual undertaking such as AUB. In one hundred years the School of Medicine has trained 1,753 doctors. There are now 1,200 living alumni, most of whom are dispersed throughout the Arab countries. These physicians have been not only practitioners of medicine for the community, but also shapers of health and educational policies in the region. They have served as ministers of health and deans of medical schools, directed hospitals in numerous cities, and advanced medical knowledge through research. Above all, they have, to a gratifying degree, joined competence with compassion and a sense of responsibility. In a unique and irreplaceable manner, their performance increases understanding and

sympathy among peoples. There is little doubt that projects with such dividends are worth supporting.

Few realize the magnanimous degree to which the School of Medicine at AUB has been both directly and indirectly supported by those who share a belief in its long-range value. Direct financial support has come from individuals too numerous to mention. Major contributions have been received from various foundations such as The Rockefeller Foundation, which has, over many years, repeatedly made available large grants for basic science and outpatient buildings as well as for faculty development. The James Foundation has previously given funds for a laboratory building and nurses' residence and for general support. The Cleveland Dodge Foundation and private donors have financed important additions to the present teaching hospital. The Commonwealth Fund has offered fellowships and visiting professorships which are making possible a highly effective affiliation with Johns Hopkins University School of Medicine through a faculty exchange program. The Columbia University-AUB Nutrition Research Program is another example of current affiliation with a University in the United States which has strengthened AUB by channeling funds into intensive research and some teaching activities. An NIH grant to Columbia continues to support this program. Finally, the Agency for International Development and other divisions of the American government have in recent years financed construction of the new medical center and other aspects of the Medical School's program, thus making it possible to modernize facilities and augment staff in the extensive fashion demanded of AUB as a regional model of medical excellence.

Both private and public universities in the United States are energetically seeking endowment funds which will preserve freedom of action and meet the steeply rising costs of education. The AUB is no exception and has recently embarked upon a Centennial Fund Campaign with a target of \$25,000,000 for endowment by 1970. Thereafter, the drive will continue with the objective of raising an additional \$75,000,000. The success of this Campaign will protect AUB's traditional independence and impartiality—attributes as essential in the future as they have been in the past.

Much has been written in recent years about the role of American universities in foreign affairs. Their influence has been enormous and highly constructive in a wide variety of ways. One of their most specific contributions is in the education of foreign students, undergraduate and graduate. For example, the data on foreign trainees in American medical schools and their affiliated hospitals, as published annually by the American Medical Association and other agencies, show clearly that the United States is the Mecca for internship, residency, and other graduate training. It is difficult from statistics alone to evaluate the beneficial influence which accessible, diversified, and high-quality training in American teaching institutions has had on medical education and care abroad. It is possible, however, to illustrate the salutary nature of this influence by showing how remarkably Harvard has helped the development of medical sciences at the American University of Beirut. Calvin H. Plimpton '43A, former professor of medicine and associate dean (1957-59), is now chairman of the AUB Board of Trustees; George P. Berry, M.D., former dean of HMS, is a member of the AUB Board of Trustees; Samuel B. Kirkwood '31 is president of



the American University of Beirut and former dean of its faculties of medical sciences (1962-66); Vincent E. Lind, M.B.A. (Harvard, 1959) is comptroller; John L. Wilson '39 is dean of the AUB faculties of medical sciences and professor of surgery; and Craig S. Lichtenwalner, M.P.H. (Harvard, 1955), M.D. is associate dean of the faculties of medical sciences and director of the School of Public Health and professor of public health practice.

About 20 per cent of the faculty of AUB have had training in the Harvard Medical School itself, or one of its affiliated institutions. This is a measure of AUB's indebtedness to Harvard which, at the fundamental level of faculty development, has lent its invaluable support to medical education throughout the world.

The most uncertain aspect of the future for all universities in the Middle East, including AUB, is the political situation which tends to be volatile. Ideological differences between activist and gradualist regimes, and the controversial issue of Palestine promise periodic disturbances in the years ahead. Unrest of this kind inevitably has unfavorable repercussions on educational programs which are so important to progress and ultimate stability in the Arab Middle East. This area, two-thirds as large as the United States, contains seventy million people and envelops the crossroads of two continents. It is the cradle of western civilization and the mother of its religions. In respect to resources it has, in addition to other assets, two-thirds of the world's known oil reserves. Consequently, the development of this central and sensitive region is of general concern. Political uncertainties have never prevented effective cooperation to this end by the American University of Beirut. It is axiomatic that such cooperation must be consistent with historical realities and humanitarian goals. Confident in the soundness of this concept, the AUB School of Medicine has begun its second century of service to the Middle East.

## **Epilogue: Letter to America**

Perhaps a report on general conditions in the Arab Middle East from an on-the-spot observer may be of interest as further background to this review of medical education at the AUB. Please remember that it is impossible to interpret today's events without a backward look into history.

Prior to the end of World War II, American interest in the area was comparatively minor. The United States projected a vague and comforting image of progress, philanthropy and Wilsonian ideals of self-determination. Independence of the Arab states, following withdrawal of the French and British, left the region divided along lines determined by mandates, and spheres of influence, as well as traditional differences within the region. Many commitments and alignments made by outside powers during the colonial period were, as might be expected, unacceptable to the Arabic inhabitants of the region who are disposed to make political and economic arrangements permitting close cooperation among themselves for development and defense.

The Arab countries are, as a whole, poorly developed and have weak defenses. Efforts by the United States to fill the defense vacuum during the early stages of the "cold war" led to pacts and doctrines which seemed suspiciously like a return to foreign control over regional affairs and were therefore resented and rejected. Throughout this period the

United States has made genuinely constructive efforts to encourage the growth of free institutions, and large sums of money have been given for economic and social development. Nevertheless, there has been progressive deterioration of the American position and moral influence in the region.

Unquestionably, the primary reason for this is the Palestine problem which remains unsolved after three wars in two decades. As an indication of the magnitude of this problem, there are now over a million Palestinian refugees, many of them living under truly distressing conditions. The number, which grows slowly each year by births, increased sharply after the war of June 1967. The United States, incidentally, is the source of over 60 per cent of the budget of the United Nations Relief and Works Agency which provides for Palestinian refugees.

The United States has for 10 to 15 years faced increasing resistance to its conscientious policies and objectives in the Middle East. During the June 1967 war, relations with the United States were summarily broken by a number of Arab states; unjustifiably, it is true, but this is a measure of the adverse feelings which have mounted year by year. There is a definite drift toward the Soviet bloc among the socialist countries of the region, most notably Syria and the United Arab Republic. This is inevitable to a certain extent, but it is being unduly accentuated, and military aid from the communists has become a major factor in the balance of power.

If unaltered, where will these trends lead? The antagonists in the Middle East may gradually maneuver their wary super-power supporters into a position of military confrontation. This is the most pessimistic view but it is a widely held one and must be seriously considered as a conceivable result unless the present course of events can be changed. The June 1967 war gave the world a brief glimpse of this dangerous possibility.

It is more likely, however, that sporadic border incidents and intermittent wider hostilities will continue to occur until some formula is eventually found for rehabilitating the Arab refugees and agreeing upon legal boundaries. This may take many years. Twenty years have already passed since the partition of Palestine and the solution seems little nearer than in 1948. The crux of the matter is that the native Arab people of Palestine have also a deep attachment to the land with strong national aspirations of their own. They and the Arab countries have not accepted their displacement and this explains the persistent deadlock.

From the point of view of broad American interests in an extensive, populous and strategic region, the Palestine issue has perhaps assumed disproportionate importance. The United States is now identified, rightly or wrongly, as an unfriendly partisan by the Arab countries. The result appears to be a net loss of American ability to exercise the significant influence which it certainly has had (and still has) in the region for the benefit of all the countries and the world at large. Radical revision of approach is doubtless neither feasible nor called for. It would be unwise for the United States to abandon its principle of impartiality and good will to all parties concerned. It would seem timely, however, to bolster credibility that it is adhering to this principle. Meanwhile let us all support and engage in those peaceful pursuits which transcend international boundaries and differences.

## College Dropouts

In his article "College Dropouts," Dr. Farnsworth calls attention to the variety of reasons that may cause students to interrupt their college education. Many of the reasons are valid and many "dropouts" are not "cop outs." One would agree that the pause that refreshes is certainly not a disaster for young people, but rather can be beneficial in permitting time for maturation and a determination of a purpose in life.

These observances of Dr. Farnsworth stimulate two questions regarding medical school: how do college dropouts fare in medical school acceptance; and is there a dropout problem in medical school?

Without undertaking a detailed analysis, it has been our impression that over the years there are very few college dropouts in the pool of applicants to Harvard Medical School. An occasional student admitted to HMS has indeed interrupted his college education for some of the reasons stated by Dr. Farnsworth. Careful survey of the HMS classes of 1970 and 1971 has shown that there is only one student in these two classes who could be listed in the category of a college dropout.

There has been no analysis of why college dropouts are so infrequent among the aspirants to Harvard Medical School. It is probable that the necessity for planning several years ahead in preparation to meet the requirements for medical school forces young people to become more committed to a career than the college student who does not see the purpose of it all and requires

time out to discover his own motivation. Secondly, the many years required for total medical education undoubtedly discourages dalliance along the way—for better or for worse.

Among the successful applicants to Harvard Medical School each year, there are several who take advantage of special awards such as Fulbright, Marshall, Rhodes and other post-baccalaureate fellowships to spend a year or more of study and travel prior to coming to the Medical School. This might be considered a form of "dropping-out" but the Committee on Admission recognizes this opportunity as an asset. Recipients of these fellowships gain added depth of knowledge in the biological sciences and broaden their experience with social problems which increase their stature as medical students and physicians.

Dropouts in medical school are also an unusual phenomenon. It is a common saying that it is difficult to get into the Harvard Medical School, but it is almost impossible to get out by a route other than the M.D. degree. The attrition rate for any class during four years at HMS is approximately two percent, that is, a total of not more than two or three who enter a given class fail to complete their medical education. The few who do "drop-out" do so for lack of motivation or emotional reasons. A number of medical students each year interrupt the regular curriculum work for a year or two of independent study. The occasional student who has suffered anxiety or depression sufficient to interfere with his studies may take a year or two out

for therapy, at the same time participating in a research project related to medicine.

While the Committee on Admission is not infallible, it is probable that the low attrition rate at HMS can be attributed to the selection process that tends to eliminate the immature, the poorly motivated, and those whose personal qualities seem unsuitable to a career in medicine. By the time students arrive at HMS, they have generally recovered from an identity crisis. Although their exact career plans may be somewhat vague, there is little doubt of their commitment to some area of the health field.

The so-called dropout problem may be a misnomer and not a false issue. Undoubtedly large numbers of dropouts return to college and eventually may find productive and satisfactory careers. But one must conclude that the dropout does not seem to be the type of person who seeks a career in medicine.

## Life-in-Death

Much remains unsettled in medicine, gravely concerned with matters of life and death, as it is driven by relentless progress to greater and greater efforts in preserving the spark of what appears to be life. If the victory of the grave is still in question, the sting of death seems actually to be sharpened, to the point where life and death must be redefined to try and determine where one makes its exit and the other enters.

Such a redefinition has been undertaken by an *ad hoc* committee of 12 members of the Harvard faculties of Medicine, Public Health, Divinity and Arts and Sciences. It has reported its



conclusions to the dean of the Medical School, the report has been published in the *Journal of the American Medical Association*, it is summarized elsewhere in this issue of the *Bulletin*, and the matter is settled, once if not for all.

The committee was appropriately chaired by Henry K. Beecher '32, Henry Isaiah Dorr Professor of Research in Anesthesia at the Medical School and the Massachusetts General Hospital, an authority on the resuscitation of the desperately ill and dying, who has also probed deeply into the ethical considerations involved. He must have been often reminded of Coleridge's "nightmare Life-in Death," and, indeed, the decision when to turn off the resuscitator may be itself a sort of nightmare.

As Beecher stated in his Bernard Eliasberg Memorial Lecture, "The Right To Be Let Alone; The Right To Die," delivered at Mount Sinai Hospital last December, whereas the individual strives to protect his privacy, the collection of individuals called society tends always to invade that right to seclusion. And still "life persists and death may intervene at various levels, step by step." The statement suggests the dilemma but does not solve it. As noted in a "Personal View" published within a few months in the *British Medical Journal*, "Death by degrees has become as a largo, played on a variety of organs that fade out one by one, with the question ever recurring: how long may a person be salvageable, to what degree and for what purpose?"

The value that is attached to life is like a spectrum; at one end it is a matter of excessive concern, of almost fantastic sanctity lest the spark be allowed to fade away while it may still retain some degree of viability if fanned by an effective breath, however electrically contrived. At the other end it seems almost without worth in the

cities' streets and alleys, on the battlefield, in the jungle villages.

The natural process of dying, indeed, in view of some of man's questionable miracles, has become more and more often a matter of prolonged irreversible coma or semicoma.

Our lack of understanding is expressed in a stanza from Sir William

Watson's "An Epistle to N.A.," discerningly selected by the editors of Bartlett's *Familiar Quotations* for inclusion in that immortal collection:

For still the ancient riddles mar  
Our joy in man, in leaf, in star.  
The Whence and Whither give no rest,  
The Wherefore is a hopeless quest.

## The First Consultation

The review of Dr. George C. Shattuck's "Memoir" of his father, Frederick Cheever Shattuck, 1873, published in the Spring issue of the *Bulletin*, inspired the letter in the current issue from Dr. Orville F. Rogers, '12, commenting on the review and on Dr. Shattuck's attentive kindness during Dr. Rogers's mother's last illness. An additional communication from Dr. Rogers gives further information on the friendship between his father and Dr. Shattuck, and its origin.

The elder Orville Forrest Rogers and Fred Shattuck joined the Massachusetts Medical Society in 1873. They were unacquainted at the time and Rogers was some three years older than Shattuck. According to his obituary, written by Dr. Shattuck for the *Boston Medical and Surgical Journal* of April 5, 1923, and republished in the "Memoir," Dr. Rogers had been born and raised in Tilton (then Sanbornton Bridge), New Hampshire, a lad of independent spirit and unbounded determination.

His education was less formal than Dr. Shattuck's. Having decided to study medicine he apprenticed himself to Dr. Lyford, of Tilton, attended a course of lectures at Harvard Medical School, and at the end of a year applied for a medical commission in the Union Army. The examiner, not uninfluenced by some subtle form of persuasion, passed him and he was assigned as assistant surgeon to a Negro regiment in the Army of the Potomac. He re-

mained with the outfit through the War and for two additional years on the Mexican border, until Maximilian was overthrown. It was there that his men, restricted to army rations, became afflicted with scurvy. He learned that a cure could be found in the juice of the century plant and put this treatment into effect with satisfactory results.

Somewhat later, in the early years of his practice, according to the more recent letter from his son, he had under his care a patient with a baffling illness; he recalled reading an account of this condition, or something resembling it, written by a Dr. Shattuck of Boston. An appointment for a consultation was made and Dr. Shattuck was met at the local railroad station. "The train came and went, all the passengers went away except one, leaving a young, smooth-shaven, ruddy-cheeked man, instead of the middle-aged, possibly bearded, possibly gray-haired man Father was expecting to meet."

It was, of course, Dr. Shattuck, the consultation was held, the diagnosis confirmed, and the treatment approved. This was presumably the start of their lifelong friendship; later Dr. Shattuck revealed it was the first time he had been called in consultation.

As such it represented the practical beginning of a half-century career in clinical medicine that was to have a profound and salutary influence on its practice.

# Constitution of the Harvard Medical Alumni Association

AS AMENDED MAY 31, 1968

## ARTICLE I

The name of this Association shall be the "Harvard Medical Alumni Association."

## ARTICLE II

The objects of this Association shall be to advance the cause of medical education, to promote the interests and increase the usefulness of the Harvard Medical School, and to promote acquaintance and good fellowship among the members of the Association.

## ARTICLE III

Section 1. There shall be two classes of members—alumni members and honorary members.

Section 2. Each alumnus of the Harvard Medical School shall become *ipso facto* a member of the Association. Each alumnus shall be so notified at the time of the graduation of his class.

Section 3. There shall be no fixed dues, but each year a request for voluntary subscriptions shall be sent to all alumni.

Section 4. All physicians who have received any honorary degree from Harvard University shall become *ipso facto* honorary members of the Association. Honorary members may also be elected by the Council. All members of the Faculty of the Harvard Medical School shall be considered, during their term of service honorary members of the Harvard Medical Alumni Association. Honorary members shall not vote or hold office.

Section 5. By unanimous vote of the Council, any member may be dropped.

## ARTICLE IV

Section 1. The Officers of the Association shall be a President, a President-elect, a Vice-President, a Secretary and a Treasurer.

Section 2. The President and President-elect shall be elected annually. The Vice-President, Secretary and Treasurer shall be elected for the term of three years. (See By-Law I).

## ARTICLE V

Section 1. The Council of the Association shall consist of nine elected Councillors and, *ex officio*, the officers of the Association, the Alumni Director, the Editor of the *Bulletin*, and the immediate past-President.

Section 2. Three councillors shall be elected by mail ballot annually for a term of three years. (See By-Law II).

Section 3. The new officers and councillors shall take office on July 1st following their election.

Section 4. Vacancies occurring in any of the offices or in the membership of the Council before the expiration of the respective term shall be filled by the Council for that term.

## ARTICLE VI

Section 1. The annual meeting of the Association shall be held in Boston, Massachusetts, in conjunction with Alumni Day of the Medical School.

Section 2. The President or the Council shall have the power to fix the number of members of the Association necessary to constitute a quorum for the transaction of any and all business.

Section 3. The President, the Secretary and the Treasurer shall each submit to the Association, at its annual meeting, a report for the preceding fiscal year.

## ARTICLE VII

The President or the Council shall have the power to call a special meeting of the Association at any time, provided that at least two weeks' previous notice be given to all members of the Association.

## ARTICLE VIII

Section 1. The executive power of the Association shall be vested in the Council, subject to the control and direction of the Association.

Section 2. The Council shall have the power to appoint, from time to time, one or more corresponding secretaries to promote in their respective localities the objects and interests of the Association.

Section 3. The Council shall hold three stated meetings each year, one in the fall, one in the winter, and one just preceding the annual meeting of the Association.

Section 4. The President may postpone or cancel stated meetings or call additional meetings as may seem expedient, with the approval of the Council.

Section 5. For purposes of transacting business at all meetings of the Council, nine members thereof shall constitute a quorum.

Section 6. The relations between the Alumni Association and the Harvard Medical School shall be by agreement between the Council or its Director and the Dean.

## ARTICLE IX

Section 1. There shall be a Director of Alumni Relations who shall be appointed by the Council after it has considered the recommendations of a nominating committee consisting of the Dean of the Harvard Medical School or his nominee, the Secretary of the Association, and four Councillors appointed by the President. The Director shall be a physician and preferably a graduate of the Harvard Medical School. He shall hold office for a term of five years and until his successor is appointed.

Section 2. The Director of Alumni Relations shall administer the affairs of the Association, subject to the control and direction of the Council.

Section 3. The Director shall be responsible for the solicitation of Alumni annual giving program.

Section 4. The Director shall be responsible for arranging Alumni reunions, Alumni events, national Alumni conferences, arranging for speakers at Medical School Alumni functions, and shall confer directly with the Dean.

Section 5. The Director shall be responsible for liaison with the Associated Harvard Alumni on matters relating to the Medical School Alumni.

Section 6. The annual budget of the Alumni Association including the expenses of the *Bulletin* is to be prepared by the Director of the Alumni Association in collaboration with the Treasurer of the Alumni Association. It is then to be submitted to the Council and to the Dean of the Harvard Medical School for approval.

## ARTICLE X

Section 1. The *Bulletin* of the Harvard Medical Alumni Association shall be the official organ of the Association. The *Bulletin* shall be sponsored by the Association and shall be published for the purpose of furthering the interests of the Association and its relations with the Medical School.

Section 2. The Editor of the *Bulletin* shall be appointed to that office by the President subject to approval by the Council. He shall hold office for a period of five years.

Section 3. The Business Manager of the *Bulletin* shall be appointed by the Editor of the *Bulletin* subject to approval by the Council.

## ARTICLE XI

The Constitution may be amended by a *majority* vote of the members of the Association present at the annual meeting, or at any special meeting called for the purpose, notice of such amendment having been given in the call for the meeting.

## BY-LAW I.

A Committee of three members to nominate officers shall be appointed by the President of the Association and confirmed by the Council at its first meeting in the fall of each year. This Committee shall submit to the Council, before January first of the succeeding calendar year, a list of names of one or more candidates for each office to be filled during the ensuing year. The candidates for office so nominated shall be selected from this list by the Council and shall be proposed for election at the next annual meeting of the Association.

## BY-LAW II.

Three Councillors shall be elected annually to hold office for three years and to fill the places of those whose terms of office shall have expired.

For this purpose a committee of five members to nominate Councillors shall be appointed by the President of the Association and confirmed by the Council at its first meeting in the fall of each year. This committee shall submit to the Council before the first of January the names of at least six members of the Association eligible for election to the Council. Three of these nominees shall reside in New England.

The names of the candidates shall be placed upon the official ballot in chronological order indicating their residence and the years of their classes at the Harvard Medical School. Upon the face of the ballot, there shall be a statement of the number of Councillors to be elected, a note to the effect that each is to be elected for a term of three years, and such further information or instruction to the voter as may be judged necessary. Space shall be provided for writing in the names of other nominees.

The Secretary of the Association shall on or before the first of April in each year, mail to each member of the Harvard Medical Alumni Association this official ballot. Each member of the Association may prepare his ballot, sign the same with his name, and return the ballot to the office of the Association.

Ballots so prepared and signed, and received at the Office of the Association prior to twelve o'clock noon on the Friday preceding the annual meeting of the Association, shall be counted for the election of three members of the Council for the ensuing three years. None but official ballots shall be received or counted. Ballots shall be counted and cast only for those candidates against whose names crosses have been marked. If more names are duly marked in the manner required than there are Councillors to be elected, the entire ballot shall be set aside and not counted.

The nominee residing in New England who receives the highest number of votes, the nominee residing outside of New England who receives the highest number of votes and the nominee irrespective of where he lives who receives the next highest number of votes to either of the first two shall be elected members of the Council for the ensuing three years, and their names shall be announced at the annual meeting of the Association.



# ALONG THE PERIMETER

## Three Professors Become Emeritus

Three distinguished Harvard Medical School faculty members have been promoted to the rank of emeritus professor. Louis K. Diamond '27 is professor of pediatrics, emeritus; Maxwell Finland '26 is George Richards Minot Professor of Medicine, emeritus; and William T. Green, M.D. is Harriet M. Peabody Professor of Orthopedic Surgery, emeritus.

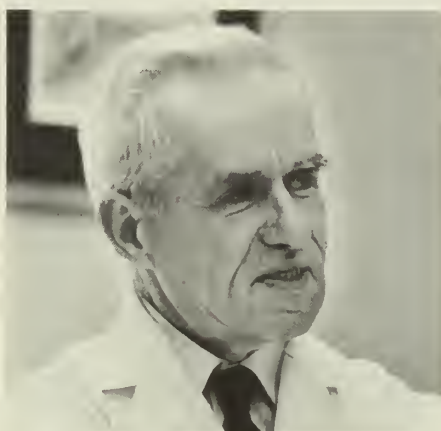


**Dr. Diamond**

Dr. Diamond has achieved international renown for his research on the Rh factor in the blood. He developed improved techniques for the detection of antibodies in the blood of pregnant Rh negative women, and, in 1946, with F. H. Allen, perfected a simple satisfactory technique which has saved thousands of children the world over from mental retardation, cerebral palsy, nerve deafness and death.

In 1966 he received the International Award of the Joseph P. Kennedy, Jr. Foundation and this year is president of the American Pediatric Society. Dr. Diamond is now professor in the department of pediatrics at the University of California Medical School in San Francisco.

Dr. Finland is one of the world's foremost authorities on the use of, and dangers inherent in, antibacterial agents in the treatment of disease. Among his research achievements are the clinical recognition of cold agglutinins in atypical pneumonia; the early clinical evaluation of many antimicrobial agents; the recognition of the dangerous potentialities of secondary invasion of the lungs by staphy-



**Dr. Finland**

lococci during influenza epidemics; the recognition of staphylococcal enteritis as a result of the alteration of the intestinal flora by broad-spectrum antibiotics; and a clear characterization of the role of ACTH and cortisone in infection.

In 1960 he received the Charles Value Chapin Award of the City of Providence, and in 1966 the Bristol Award from the Infectious Diseases Society of America. The latter consisted of a gold medal and scroll, together with an honorarium of \$2,500. With typical generosity, Dr. Finland donated his honorarium to the Fund for Clinical Pharmacology at Harvard Medical School.

Dr. Green, a recognized leader in the field of orthopedic surgery, has added much to man's understanding of skeletal growth and its disturbances. From his work at Children's Hospital have come many norms of skeletal growth, methods of prediction of growth, and techniques for the cor-

**Dr. Green**



rection of discrepancy in leg length. His interest in musculoskeletal disease was further emphasized by his work in poliomyelitis, one of his major concerns until it became essentially a disease of the past in 1957. He made contributions not only to the surgical techniques and rehabilitative measures, but to treatment during the acute and convalescent stages.

He received the M.D. degree in 1925 from Indiana University Medical School. Dr. Green has served as president of the American Academy of Orthopedic Surgeons, the American Academy for Cerebral Palsy, and the American Board of Orthopedic Surgery.

## Seegal Student Prizes Awarded

The generosity of a 1928 Alumnus has made possible the establishment of two student prizes at Harvard Medical School. Dr. and Mrs. David Seegal have donated the funds for the Richard C. Cabot Prize "for scholarly contribution to the history of medicine" and the Rose Seegal Prize "for scholarly contribution in the area of social and community medicine." Each carries a \$500 honorarium.

The Cabot Prize has been awarded to Joseph K. Youngerman '68 for his paper "The Hysteria of History;" the Seegal Prize went to Alvin A. Rosenfeld '70 for his paper "Private Group Practice in Sweden."

The Prizes honor the late Richard C. Cabot who, at the time of his death in 1939, was professor of clinical medicine, emeritus, at HMS and professor of social ethics, emeritus at Harvard College; and Dr. Seegal's mother, the late Mrs. Rose Seegal who, was a "wise, socially minded, self-educated intellectual."

In accepting the fund in behalf of Harvard Medical School, Dean Ebert commended the Seegal's for their recognition of "two of the most critical areas in medical education, the history of medicine and the relationship of the medical profession to the community."

## Community Appointments

Dean Robert H. Ebert announces three new appointments to the Center for Community Health and Medical Care at Harvard. The Center is a university-wide program under the direction of the Faculties of Public Health and Medicine.

Stephen J. Miller, Ph.D., of Brandeis University is appointed as a member of the Center for Community Health and Medical Care. Dr. Ebert views this new appointment as "another step in our plan to bring key members of other faculties who have an interest in health problems."

Dr. Miller will continue to serve as associate professor at the Brandeis University Florence Heller Graduate School for Advanced Studies in Social Welfare. He received the B.S. degree in 1958 from St. Peter's College and the Ph.D. degree from Saint Louis University in 1963. He has done further graduate study at the Kansas City Mental Health Foundation and the National Training Laboratories in Bethel, Maine. Dr. Miller has been associated with Brandeis University since 1964.

Dr. Miller served as president of the Greater Kansas City Sociological Society (1963) and has been a consultant to a variety of community study and medical care programs.

Ronald Tilden Rozett '63 has been appointed Fellow of the Center for Community Health and Medical Care.

As a part of his training experience, Dr. Rozett will be assisting Dr. James B. Hartgering, Commissioner of Health, Hospitals, and Welfare in Cambridge, Massachusetts. Dr. Rozett's interests lie in problems relating to the delivery of medical care, particularly the coordination of community health resources with public planning.

Dr. Rozett received the A.B. degree in 1959 from New York University and the M.P.H. in 1968 from Harvard. He was elected to Phi Beta Kappa at New York University and was a member of the Boylston Medical Society at Harvard.

Dr. Rozett served as Assistant Preventive Medical Officer at the Walter Reed Army Medical Center (1965-1967) and was awarded the Army Commendation Medal.

Mrs. Ellen Whitman Jones, M.P.H., has been appointed senior research

associate in the Center.

For the past two years, Mrs. Jones has been director of program planning for Community Health Programs in the New York City Department of Health, serving under Paul M. Densen, M.D., former Deputy Administrator of the Health Services Administration in New York City. Dr. Densen is now the director of the Center for Community Health and Medical Care at Harvard.

Mrs. Jones received the A.B. degree in 1936 from Vanderbilt University and the M.P.H. degree from Harvard in 1944.

## Thyrocalcitonin

Henry T. Keutmann '63, and his co-workers at the National Heart Institute, have made fundamental contributions to medicine's understanding of the hormone, thyrocalcitonin.

They have provided the first chemical definition of the hormone's structure that has just led to its synthesis by Swiss researchers; provided a sensitive method of measuring the normally minute amounts of hormone circulating in the blood; established through the assay method, the hormone's physiological importance in bone and mineral metabolism; and demonstrated that the purified hormone, administered to patients suffering from high blood calcium levels and bone demineralization, produces rapid and beneficial results.

In 1961, Dr. Harold Copp, a Canadian scientist, first identified the existence of a blood calcium-lowering substance, later shown to be thyrocalcitonin. In 1963, Dr. Paul Munson who was then professor of pharmacology in the Harvard School of Dental Medicine, correctly identified the thyroid gland as the origin of the new hormone. Dr. Munson and his co-workers extracted the active substance from hog thyroids, and proposed that thyrocalcitonin was a second major hormone elaborated by the thyroid gland. It was credited with acting in concert with parathyroid hormone to regulate blood calcium and preventing calcium demineralization and attendant softening of bones.

But, in essence, it was the work of the researchers at the Heart Institute's Laboratory of Molecular Diseases that defined thyrocalcitonin, a hormone whose existence was unknown only a few short years ago.

## Moxley Named Dean

John H. Moxley 3d, assistant to the Dean of HMS, will become Dean of the Faculty of Medicine and lecturer in medicine at the University of Maryland School of Medicine on June 1, 1969.

He received the A.B. degree in 1957 from Williams College and the M.D. degree in 1961 from the University of Colorado School of Medicine. He interned in medicine and took his residency training at Boston's Peter Bent Brigham Hospital.

From 1963 to 1965, Dr. Moxley was clinical associate at the National Cancer Institute, NIH, where his research involved the use of chemotherapy and x-irradiation in the treatment of Hodgkins Disease and in the kinetics of leukocytes in various types of leukemia.

In 1965, he returned to Boston as senior resident physician at the PBBH. Dr. Moxley is currently a member of the Lymphoma Task Force of the National Cancer Institute, junior associate in medicine at the PBBH, clinical associate in medicine at the West Roxbury V.A. Hospital, and a member of the Courtesy Staff of the Cambridge City Hospital. He has been an instructor in medicine and assistant to Robert H. Ebert, Dean of HMS, since 1966. In 1966-67 he was a staff member of the National Advisory Commission on Health Manpower.

Dr. Moxley is a member of the medical honorary society, Alpha Omega Alpha, the American Public Health Association, and the Massachusetts Medical Society.

Dr. Moxley





# Ad Hoc Committee Defines Final Determination of Death

Who is responsible for the final determination of death through irreversible coma? A set of medical guidelines, promulgated by an *ad hoc* committee composed of twelve members of the Faculties of Medicine, Public Health, Divinity and Arts and Sciences at Harvard University, has firmly placed the ultimate decision with the physician-in-charge.

The physician pronouncing this critical judgment must also be responsible for informing the family, all colleagues who have participated in major decisions concerning the patient, and all nurses.

"At this point death is to be declared and then the respirator turned off. The decision to do this and the responsibility for it are to be taken by the physician-in-charge in consultation with one or more physicians who have been directly involved in the case."

The committee members considered it to be "unsound and undesirable" to force the family to make the decision.

The committee report emphasized that "the decision to declare the person dead and then turn off the respirator should be made by physicians not involved in any later effort to transplant organs or tissue from the deceased individual."

The report of the committee, chaired by Henry K. Beecher '32, Henry Isaiah Dorr Professor of Research in Anesthesia at Harvard and the Massachusetts General Hospital, as presented to Dean Robert H. Ebert, was published in the August 5, 1968 issue of *The Journal of the American Medical Association*.

Dr. Beecher cited two major reasons that necessitated a definition of irreversible coma—involving comatose individuals who have no discernible central nervous system activity:

1. Improvements in resuscitation and supportive measures which have led to increased efforts to save the desperately injured; individuals whose hearts continue to beat but whose brains are irreversibly damaged.

2. The use of obsolete criteria for the definition of death which can lead to controversy in obtaining organs for transplantation.

According to Dr. Beecher, the committee's first problem involved determining the characteristics of a permanently non-functioning brain. The committee agreed that the characteristics could be diagnosed by reference to these clinical signs:

## Unreceptivity and Unresponsivity

The committee's definition of coma is a total unawareness of externally applied stimuli and inner need and complete unresponsiveness. Even the most intensely painful stimuli evoke no vocal or other response, not even a groan, withdrawal of a limb or quickening of respiration.

## No Movements or Breathing

Observations covering a period of at least one hour by physicians is adequate to satisfy the criteria of no spontaneous muscular movements, spontaneous respiration, or response to stimuli such as pain, touch, sound, or light. After the patient is on a mechanical respirator the total absence of spontaneous breathing may be established by turning off the respirator for three minutes\*\* and observing whether there is any effort on the part of the subject to breathe spontaneously.

\*\* Provided at the start of the trial period the patient's carbon dioxide tension is within the normal range, and provided also that the patient has been breathing room air for at least ten minutes prior to trial.

## No Reflexes

Irreversible coma with abolition of central nervous system activity is evidenced in part by the absence of elicitable reflexes. The pupil will be fixed and dilated and will not respond to a direct source of bright light. The establishment of a fixed, dilated pupil is so clear-cut in clinical practice, there should be no uncertainty as to its presence. Ocular movement (to head turning and to irrigation of the ears with ice water) and blinking are absent. There is no evidence of postural activity (decerebrate or other). Swallowing, yawning, vocalization are in abeyance. Corneal and pharyngeal reflexes are absent.

As a rule the stretch or tendon reflexes cannot be elicited. Plantar or noxious stimulation gives no response.

The committee report indicated that confirmatory data may be provided by the EEG, if such is available. It is considered prudent by the committee

"to have one channel of the apparatus used for an electrocardiogram. This channel will monitor the electrocardiogram so that if it appears in the electroencephalographic leads because of high resistance it can be readily identified. It also establishes the presence of the active heart in the absence of the electroencephalogram. We recommend that another channel be used for a non-cephalic lead. This will pick up space borne or vibration borne artifacts and identify them."

Members of the committee stressed that the clinical as well as the electroencephalograph tests should be repeated at least twenty-four hours after the initial tests.

The Harvard committee thought that if new criteria for pronouncing death in an individual sustaining irreversible coma as a result of permanent brain damage were to be adopted by the medical profession, such criteria could form the basis for change in the current legal concept of death.

"No statutory change in the law should be necessary," the report pointed out, "since the law treats this question essentially as one of fact to be determined by physicians. The only circumstance in which it would be necessary that legislation be offered in the various states to define 'death' by law would be in the event that great controversy were engendered surrounding the subject and physicians were unable to agree on the new medical criteria."

Dr. Beecher



## Fund for Disadvantaged Students Moves Forward at HMS

Apathy, past discouragements and disillusionments go hand in glove with poor educational opportunities, cultural differences and economic deprivations in limiting the number of black and disadvantaged young Americans who aspire to careers in clinical, academic or research medicine.

These factors, coupled with the shorter training periods, the greater social impact and the promise of more rapid economic rewards of other professions, tend to discourage college students in these categories from applying for admission to the nation's medical schools.

Harvard Medical School is taking what it believes to be positive and helpful steps to offset some of these negative attitudes. Accordingly, a program is underway to prepare a significant number of such students for careers in medicine and dentistry. The program is under the direction of Dr. David D. Potter, associate professor of neurobiology.

The fund for disadvantaged students will support recruiting efforts, special remedial work that may be required, and scholarships, some of which will be named for the late Martin Luther King, Jr.

Because an education at HMS currently costs \$5,000 annually, an immediate goal of \$75,000 has been set to provide the scholarships for the first group who will be admitted in 1969-70. In subsequent years, the need will rise to \$300,000 annually. Support is being sought from the Faculty and Staff, and from philanthropic foundations, corporations and friends of the Medical School.

Since approval of the program was voted in April:

- Members of the Faculty of Medicine and others in the School have pledged more than \$40,000 to the program. Additional pledges are being added daily.

- Active recruiting has been undertaken of disadvantaged students already fully prepared for medical school.

- Conversations have been initiated with groups at Harvard College to enroll, for a period of up to and including a full academic year, promising students whose academic deficiencies can

be corrected by supplementary coursework at the College.

- Discussions are underway within the Faculty of Medicine toward offering a five-year program leading to the M.D. degree. The first year would consist of basic science courses and tutorials to increase the students' preparedness for the following years. The ensuing four years would consist of the regular HMS curriculum.

- Steps are being taken to identify early those students who manifest an interest in medicine and to provide appropriate summer curricula for them at Harvard University.

- Mr. Edgard L. Milford, Jr., a second-year HMS student has been appointed fellow in administrative medicine. Mr. Milford, who was active in Afro-American affairs while at Harvard College, is working in the Admission Office initiating contacts with black student organizations in colleges to inform them of the Harvard program.

### Mere Technicality

Computers can do things  
(including some new things)  
That rank as a medical plus,  
But their future's unknown  
Until research has shown  
How computerized life affects us.

To the man who maintains  
That electronic brains  
Are the savior that science has  
prayed for,  
I'd say that he's glossed  
Over what they will cost  
And how many repairs must be paid  
for.

But if, on their merit,  
Computers inherit  
Our work, then beware of our heir,  
men:  
For one of these days  
These machines that we praise  
Will be Deans, or Departmental  
Chairmen.

MICHAEL M. STEWART '65

## Confidentiality

The policies and practices of North American colleges and universities regarding confidentiality in student mental health services was the topic of a study conducted by William J. Curran, Frances Glessner Lee Professor of Legal Medicine in the Faculty of Medicine and Faculty of Public Health at Harvard. Dr. Curran presented his findings in a paper delivered last May at the annual meeting of the American Psychiatric Association in Boston.

A general question on the degree of confidentiality exercised was put to 488 American and Canadian institutions, all members of the American College Health Association. In addition, a reply was obtained from the secretary of the Student Health Association of Great Britain.

Professor Curran discovered that most of the respondents had developed and consistently followed certain practices, but lacked printed general policies.

The answers of 19 schools were accompanied by printed policies, varying in length and complexity. The policies of the University of California at Berkeley, Dartmouth College, and the University of Massachusetts were among the most complete and persistent. Twenty-two institutions adhered to the *Recommended Standards and Practices of the American College Health Association, Supplement on Ethical and Professional Relations*.

The questionnaire specifically explored practices and policies in four areas: parents, university and administration, the keeping of records, and inquiries from outside organizations such as graduate schools, prospective employers, the Armed Forces, and government agencies.

### Parental Responsibilities

The great majority of replies indicated that parents are not informed by the health services of contacts for consultation, counseling, or for short-term, out-patient, crisis-oriented treatment where such is offered by the health service. Most will notify parents of hospitalization, serious illness, or a suicide attempt. A small number would inform parents only if hospitalization was necessary outside the university campus in a general hospital



or a psychiatric institution. Eight graduate schools, where the majority of students was assumed to be over twenty-one or married, seemed to adopt a policy of not informing parents under any circumstances. Most respondents were concerned with policies that would be conducive to molding young people into responsible adults.

### Communication

The general position was adjudged to be "strongly favorable toward maintaining confidentiality." In no school was information about psychiatric referrals and treatment generally available to administrators, including deans and faculty. One hundred and thirteen schools indicated that they would report a case to the administration without the consent of the student only in very serious circumstances involving danger to the student or others. Exceptions were cited in instances where the student was referred to the mental health service by the administration. In these cases the health-service physician would explain to the student at the outset that a report would be made to the dean. The student was not required, however, to say anything to the psychiatrist.

### Psychiatric Records

Professor Curran considered the replies in this area to be a disappointment for persons favoring a complete separation of psychiatric and general medical records. Only 43 colleges and universities reported a completely separate procedure. All other responses indicated that psychiatric consultation was noted in the central records. A reassuring practice was voiced by a psychiatrist in a large, private, mid-western university. Professor Curran quoted the psychiatrist: "Many of the students are concerned that somewhere in the university there exists some administrative record or dossier which contains such (psychiatric) information and is freely available to prospective employers, graduate schools, etc. There is no such record and we go to some lengths to avoid having it even known among the rest of the University even who comes to see the psychiatrist . . . The psychiatric records are kept in a locked file entirely separate from the general health records of the student."

### Communication With Outside Organizations

Professor Curran identified communication with outside organizations as the most problematic aspect of the survey. It seems very likely that there will be considerable policy changes in this area during the coming years. With the exception of eight schools, all American institutions reported that they would not release information to outside sources concerning psychiatric referral, treatment, or prognosis without the consent of the student and of his parents if he was under twenty-one. The British Student Health Association and all Canadian universities supported this same policy. Professor Curran observed: "There would seem to be a resistance movement building up among student mental health services against giving information to these outside sources even when graduate schools, prospective employers, or government agencies come armed with the student's consent." The University of California at Berkeley, for example, maintains complete confidentiality and will release information only when it will contribute to psychotherapy elsewhere.

According to Dr. Curran, the laws in the majority of American states respect and enforce a confidential relationship between a college psychiatrist and his student-patient. Most

breeches of confidence occur only when it is necessary for individual or community welfare. Still, Dr. Curran feels that more stringent controls are in order when he says: "I have rather a suspicion that the law supports disclosure of information by physicians to third parties almost too much. . . ."

In particular, Dr. Curran found the Peace Corps to be an ". . . inexcusable violator of student confidentiality." The professor suggested that restrictions be placed on outside agencies which seek such information, requiring them to make their own investigations "without invading the confidentiality of the college mental health services."

### Confidentiality at Harvard

The stand of the Harvard University Health Services on confidentiality in student mental health is voiced by its director, Dana L. Farnsworth M.D., in his article "Educational Psychiatry." Dr. Farnsworth says: "No information about the student gained in confidence should be divulged without his explicit permission. Psychiatric records should be kept separate from the other medical records and extreme care taken to protect them. They should not be used for screening purposes for admissions committees of colleges or graduate schools, nor should they be made available to security investigators."

## Recollections

From 1942-1944 members of the 105th General Hospital—Harvard Medical School—were stationed at Queensland Agricultural College in Gatton, Australia.

Through the efforts of Eric R. Sanderson '37, a member of the 105th, a plaque now commemorates the occupation. (Dr. Sanderson detailed the experiences of the Hospital in an article, "Down Under Much Later," HMAB, Winter, 1967).

On May 15, 1968 a sandstone boulder, three feet high and one ton in weight, was unveiled by His Excellency, The Honourable Sir Alan Mansfield, Governor of Queensland. Present at the ceremony were Mr. C. P. Abotomey, president of the Australian American Association and Mr. N. W. Briton, Principal of the Queensland Agricultural College.





## Weariness “without cause”

*Psychic tension with  
depressive symptomatology?*

*“For weeks I’ve done practically nothing and I’m always tired. I wake up tired and I go to bed tired. It’s absurd. It’s really absurd.”*

When the patient complains of fatigue, and you can find no organic cause, you recognize that it may serve her as a means of avoiding responsibilities or facing an emotional problem. It is, in effect, a psychological retreat behind a somatic cover of continuous fatigue—one of the many depressive symptoms often associated with psychic tension.

She needs counsel and reassurance, and perhaps a tranquilizer to attenuate excessive tension and help restore the capacity to cope. As an aid to successful management, consider the value of Valium® (diazepam). As psychic tension is eased by Valium therapy, secondary depressive symptoms too may subside. The patient feels more capable, therefore more hopeful; better able to handle situations of intense stress.

Before prescribing Valium (diazepam), consult complete product information; a summary follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindications:** Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium, such as pheno-

thiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Employ usual precautions in the severely depressed or in those with latent depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

**Adverse Reactions:** Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

**Dosage:** Individualize for maximum beneficial effect.

**Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg, and 10 mg; bottles of 50, 100 and 500.



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# Valium® (diazepam)

*helps relieve psychic tension with associated depressive symptoms*